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ABSTRACT

The conference reported in this document focused on the issues surrounding the progress of urban public schools in bringing about reforms aimed at providing the nation's future workforce with marketable skills, obtainable only through education. Section 1, "Perspectives on Educating Tomorrow's Workforce," contains the following articles: (1) "A Researcher's Perspective" (Willard R. Daggett); (2) "An Educator's Perspective" (Blenda J. Wilson); (3) "A Legislator's Perspective" (Ken Nelson); and (4) "A Businessman's Perspective" (Robert C. Holland). Section 2, "Workforce Learning Programs," contains the following articles: (1) "Workforce Literacy: Narrowing the Job Skills Gap" (Forrest P. Chisman); (2) "An Overview of Polaroid's Technology Readiness Program" (Acquanetta C. Farrell); (3) "Teaching Workplace Basic Skills at Aetna" (Ira Mozille); and (4) "The UAW-Ford Education, Development and Training Program" (Bill Schaffner and Tony Procter). Section 3, "Special Remarks," contains the article, "Education in South Carolina: Progress for the Next Century" (Carroll A. Campbell, Jr.). Section 4, "Improving State/Education/Business Collaborations," contains the following articles: (1) "State-Education-Business Coordination of South Carolina's School Reform Program" (Terry Peterson and others); (2) "Urban Education: The Challenge of the Education Commission of the States Business Partnership" (Robert Palaich and Denise Green); (3) "Fortune: The Colorado Experiment" (Carol M. Ahlers); and (4) "National Governors' Association: Partnerships for Life-Long Learning" (Raymond C. Schappach). Section 5, "An Afterword," consists of a brief summation by Fred M. Hechinger. A list of conference participants is included. (JS)

PROCEEDINGS:

The Eleventh Conference of the
University / Urban Schools National Task Force

Educating Tomorrow's Workforce

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Edited by Richard M. Bossone
and Irwin H. Polishook

The Graduate School and University Center
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of The City University of New York

1990

PREFACE

Until the end of this century, Americans had always imagined their history as a story of unending progress. We are a people born in Revolution, given to optimism, with a spirit that never accepted the realities of failure or the limitations that must exist in any country's power. It may be that our Vietnam debacle confirmed the loss of innocence embedded in the United States concept of national mission. We can be certain that for education A Nation at Risk destroyed whatever illusions remained in 1983 about the quality of the public schools in America, with its apocalyptic warnings of academic "mediocrity" and national "peril." Regrettably, at the beginning of a new decade, there are too few indications that we have turned around the educational "tide of mediocrity" which encumbers our country's destiny.

What has happened to public education is readily apparent. Approximately, 20 to 30 million out-of-school adults are functionally illiterate, unable to complete successfully work assignments in which the ability to read, write, and calculate are put to the most undemanding tests. We also know that dropouts claim more than 25 percent of the current public school population, an educational disaster compounded by its excessive impact on minorities, who will make up a majority of our population in the next century. Although businesses invest about \$40 billion trying to redress the inadequacies of prior education, no one believes the United States can remain prosperous, competitive, and democratic without drastic changes in

the public schools. The achievement of reform involves generations of young and old whose re-education is vital to national survival.

These Proceedings demonstrate that educational progress will not be won without the combined efforts of educators, legislators, and businessmen. Governor Carroll Campbell's personal account of education revival in South Carolina serves as a sober model of the kind of vision and commitment which reform demands. Further, these papers reveal that tomorrow's workforce--including millions of adults desperately in need of marketable skills obtained only by education--requires greater attention if it is to share in the American dream of opportunity.

R.M.B.
I.H.P.

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ELEVENTH CONFERENCE OF THE UNIVERSITY/URBAN SCHOOLS NATIONAL TASK FORCE

CONFERENCE PARTICIPANTS

Chairman

Dr. Richard M. Bossone
University Dean for Instructional Research
Graduate School and University Center
City University of New York

Participants

Carol M. Ahlers
Operations Manager
Fortune Magazine

Emma Benning
Assistant Superintendent for Curriculum and Instruction
Cleveland Public Schools

Richard D. Bingham
Editor, Economic Development Quarterly
College of Urban Affairs, Cleveland State University

Robert E. Burke
Superintendent of Education
Charleston County School District

Raymond L. Byers
Educational Affairs Manager
Ford Motor Company

Manford Byrd, Jr.
Special Consultant to the Board
Chicago Public Schools

Carroll A. Campbell, Jr.
Governor
State of South Carolina

Wayne Carlson
Director of Partnership Programs
Los Angeles Unified School District

Forrest P. Chisman
Director, Washington Office
Southport Institute

Willard R. Daggett
Director, Division of Occupational Education Instruction
New York State Education Department

Gerald R. Davidson
Mid-Hudson Valley Education Manager
IBM

Frederick S. Edelstein
Senior Policy Fellow
National Alliance of Business

Donna B. Evans
Dean, College of Education
Wayne State University

Edith B. Everett
Vice Chairperson, Board of Trustees
City University of New York

Acquanetta C. Farrell
Director
Technology Readiness Program

Jerome Finnigan, Manager
Education and Training, Development and Manufacturing Group Operations
Xerox-West Coast

J. Chester Floyd
Superintendent
Lexington County School District One

Colman Genn
Community Superintendent, District 27
New York City Board of Education

Stella Gilrod
President
Gilrod Foundation

Leon M. Goldstein
President, Kingsborough Community College
City University of New York

Samuel Halperin
Study Director
William T. Grant Foundation Commission on Youth

Fred M. Hechinger
President
The New York Times Company Foundation

Grace Hechinger
Author
How to Raise a Street Smart Child

Robert C. Holland
President
Committee for Economic Development

Mary Holloway
Executive Director
Association for a Better New York

Lawrence A. Ianni
Chancellor
University of Minnesota-Duluth

Arthur Jefferson
General Superintendent Emeritus
Detroit Public Schools

Mary K. Leonard
Director, Precollegiate Education Program
Council on Foundations

Montez C. Martin, Jr.
President
Montez Real Estate

Louise P. Matteoni
Regent
The University of the State of New York

Sydney A. McPhee
Assistant University Provost
University of Louisville

Ira Mozille
Senior Education Advisor, Institute for Corporate Education
Aetna Life and Casualty

Ken Nelson
Legislator
Minnesota House of Representatives

Robert Palaich
Senior Policy Analyst and Director, Youth At-Risk Initiative
Education Commission of the States

Terry K. Peterson
Executive Director
South Carolina Business-Education Committee

Irwin H. Polishook
President, Professional Staff Congress
City University of New York

Sheila S. Polishook
Associate Professor, Queensborough Community College
City University of New York

Tony Procter
Associate Director
UAW-Ford National Education, Development and Training Center

Peter D. Relic
Superintendent
Charlotte-Mecklenburg Public Schools

John I. Rogers, III
Speaker Pro Tempore
South Carolina House of Representatives

Alan S. Rosenberg
Chairman
New York Alliance for the Public Schools

Mary DePiano Rothlein
Dean, Planning and Development, John Jay College of Criminal Justice
City University of New York

Anette Rycharski
Administrator, Corporate Contributions and Support Programs
Philip Morris Companies, Inc.

Bill Schaffner
Associate Director
UAW-Ford National Education, Development and Training Center

Jay Smink
Executive Director
National Dropout Prevention Center

Eleanor S. Turner
Research Assistant, Graduate School and University Center
City University of New York

Max Weiner
Dean, Graduate School of Education
Fordham University at Lincoln Center

Wallace T. Williams
Dean, College of Fine and Applied Arts
University of Akron

Patricia L. Willis
Operations Manager, Corporate and Community Affairs
BellSouth

James E. Wilsford
Superintendent
Orangeburg, South Carolina, School District Five

Blenda J. Wilson
Chancellor
University of Michigan-Dearborn

EDUCATING TOMORROW'S WORKFORCE: A RESEARCHER'S PERSPECTIVE

Willard R. Daggett
Director, Division of Occupational Education
Instruction
The New York State Education Department

The 1980's have been years of challenge to industry and to vocational education throughout the United States. Technological innovation, changing demographics, new economic foundation, changing aspirations of students and their parents, and increasing ability of other nations to do better than the United States in producing high quality products at low cost--all have contributed to a transformation of our society. At the same time, vocational education in many jurisdictions has been coping with new, and often confining, graduation requirements and implementation of attendant curricula intended to keep pace with the changing world of work. How well vocational education continues to adapt will determine the role it will play in preparing students for their adult lives. And how well the education establishment prepares students for their adult lives will critically affect the quality of those adult lives, society's standard of living, and our nation itself.

Advances in technology have been generating fundamental changes in all sectors of the national economy. The kinds of jobs that are available, the way that work is organized and performed, and the skills and knowledge necessary for successful performance have been profoundly influenced by changes in technology. The changing aspirations of American youth and their parents compound the problem. Neither students nor their parents

consider many of the traditional occupations for which vocational education prepares students, such as health care, child care, clerical work, and agriculture, to be viable options for occupational improvement. Even jobs which pay well, such as the skilled trades, are frequently considered to be undesirable because of the lower status which American society ascribes to work which dirties the hands. Current polls indicate that the top goals of students of both sexes are a career which is challenging, and work which provides substantial personal income. This is a significant change from the 1970's, when polls indicated, for example, that young people rated marriage and a family as their highest priorities. Also since the 1970's, increased importance of employment among females is most timely because there are fewer young adults to enter the labor market and educated people have become the driving force of growth.

Unfortunately, more than half of our secondary school students appear to have substantial deficiencies in their education, deficiencies which adversely affect their entry and progress in post-secondary education as well as in the world of work. Twenty percent of this country's high school students drop out without having adequate preparation for employment. Another 20 percent are graduated from high school, but with marginal academic preparation, no intention of continuing their education, and no vocational preparation. Still another 20 percent who graduate with minimal academic competence and no vocational preparation enter post-secondary education but, after a week, a month, or a semester, drop out, unprepared for employment. These young people will be at a decided disadvantage in the labor market of the 1990's.

Today's employment requires much more sophisticated skills than in

the past. It will soon be extremely difficult for the poorly trained and under educated to obtain and maintain employment that provides a reasonable standard of living. High school graduates who have not been adequately trained for immediate employment or a post-secondary curriculum are destined for a life of marginal economic success, all of which will produce deleterious effects on the national economy and on society. The education and business communities are striving, however, to resolve this problem. Companies all over the country are spending substantial funds, not only to train entering workers but also to improve and modernize the skills of the currently employed so that they can perform new tasks required by advanced technology. The education reform movement which swept the country in the mid 1980's, generated increased requirements for high school graduation, including additional mandated study of mathematics, science, English, and foreign languages, but seriously reduced the time available for vocational education. Although this reform movement has raised academic standards, it has not yet acceptably improved student outcomes.

A second wave of education renewal seems to be swelling, generated by the increasing shortage of capable workers, and the recognition that all individuals should have the opportunity to participate fully in the many benefits of American life. This "new wave" does not organize separate secondary educational programs for those who plan to go to college and for those who will immediately enter the labor force. It envisions, rather, an inclusive program which will prepare all students for immediate employment or college.

The labor market remains in a state of transition. A major portion of the job market is moving toward technologically based employment. Today,

manufacturing is based on systems which include such new procedures as "flexible automated manufacturing" and "just-in-time delivery."

Information related occupations are no longer found only in offices, but are on the floor of the manufacturing plant, in the laboratories and at the bedside in the health care industry, and in the kitchens of fast food establishments. The United States Department of Labor predicts that by the year 2000, 44 percent of jobs will be in collecting, analyzing, synthesizing, storing, or retrieving data. Entry-level workers must be able to enter, retrieve, and manipulate a tremendous variety of information in such complex systems as electronic mail, robotics, automated inventory, CT scan, computer-aided design and manufacturing, automotive and medical diagnostics, and communications and transportation systems. Entry-level workers will also need an enormous increase in general knowledge, and managers will need to continually adapt to an ever-improving technology in order to keep a business competitive, locally, nationally, and internationally. The key agent in this continuity of adaptation to technology is the existence of efficient and effective learning programs, employer and labor union apprentice and inservice education, and commercial vendors of structured training activities. Business, labor, government, and education must work together to ensure that every high school graduate has been prepared to effectively enter employment, either immediately or after completing post-secondary education. This will require many changes in the historic relationships of these groups.

Business and labor must recognize that they are the opposite sides of an economic coin, and substitute mutually beneficial cooperation for confrontation. Education must abandon its insularity and welcome the

cooperation of business and labor in developing a course of study that meets the economic as well as social needs of society. Government must serve as the catalyst, changing laws and regulations and the appropriation of funds as necessary, and fostering business/labor/education interaction, but not directly involving itself in the development of the curriculum. Among the problems to be solved will be procedural and material challenges. How will business and labor participate in the development of the curriculum? Where will funds be found to remodel and re-equip school facilities? But the greatest problem will be changing attitudes within all groups. We must begin immediately to move beyond the present to a new way of thinking about educating the modern workforce.

One word of caution: although we must educate the populace for an ever more technological environment, we should not neglect the humanities and social sciences, for to do so risks creating a nation of human robots overseeing electronic ones, a society which an archaeologist of 4000 A.D. could characterize by this paraphrasing of the poet Shelley's "Ozymandias":

My name is High Technology, Master of Kings,
Look on my works ye mighty, and despair!
Nothing beside remains round the decay of that colossal wreck,
Boundless and bare the lone and level sands stretch far away.

The 1980's have been years of challenge to industry and vocational education. The 1990's will be still more challenging.

EDUCATING TOMORROW'S WORKFORCE: AN EDUCATOR'S PERSPECTIVE

Blenda J. Wilson
Chancellor
University of Michigan-Dearborn

Education is a continuum which begins long before an individual reaches college age. We know the ability of a student to succeed at a college or university is significantly determined by the quality of education he or she receives earlier. Though my perspective is as an administrator in a public university, a vital concern of everyone in academic life must be the availability of quality pre-school, elementary, and secondary education for all youngsters. The qualifications of the freshman class of any college or university makes the most powerful mark on success in higher education.

We cannot begin to understand what is needed to improve urban schools without discussing the broader context in which these issues surface. In the early 1980's, major reports and untold numbers of conference discussions sounded an alarm about the failure of public schools in the United States. A Nation at Risk, published by the National Commission on Excellence in Education; America's Competitive Challenge by the Business-Higher Education Task Force; Action for Excellence by the Education Commission of the States; and Making the Grade by the Twentieth Century Fund, among others, have titles that suggest the range of concern. In addition to proposing the reform of schools as learning institutions, these reports highlighted the presumed causal relationship between the

deficiencies of public education and the decline in the American economy.

Not since the Sputnik shock of 1957 has educational achievement been so directly linked to the national interest. Diane Ravitch expressed the public perception in the Troubled Crusade: American Education 1945-1980: "...Sputnik had happened not because of what the Russians had done but because of what American Schools had failed to do." As in 1957, the language of A Nation at Risk referred to the education crisis in political/military terms: "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war." The report links that earlier time of national alert with today by suggesting that we have squandered gains in student achievement that were made as a result of major federal interventions in education in response to the Sputnik challenge.

But while Sputnik called forth a major investment in science education, the national alarm that is attending today's criticism of education is probably more complex and more frightened. The public dialogue is asking a broader range of education-related questions about the state of the United States economy. Why is the U.S. economy floundering in double digit inflation? Why did our trade balance in manufactured goods collapse from the \$17 billion dollar surplus in 1980 to a \$139 billion dollar deficit in 1986? Why have one to two million domestic manufacturing workers become unemployed during the past three years alone? It is understood today that the quality of our education system and the future state of our economy are inextricably linked.

These worries are directed toward higher education because a larger proportion of workers are introduced into the work force directly through

higher education today than in earlier times. In 1870, for example, only 2 percent of workers had a post-secondary education; today that figure is 45 percent. Higher education has a veritable monopoly on entrance into the professions. All of these questions are being laid at the feet of those institutions which purport to educate and train the workers and professionals that are essential to this economy.

Some of the more educationally oriented questions are equally potent. Why is it that, according to the National Commission on Excellence in Higher Education, "...for the first time in the history of our country, the educational skills of one generation will not surpass, will not equal, will not even approach, those of their parents?" Or, as the public recognizes the increasingly international dimensions of economic development and geopolitical balance, why is it that 350,000 foreign students are enrolled in United States colleges while less than 50,000 American students study abroad each year? And, most importantly for our discussion, why is higher education failing so miserably in preparing the fastest growing segment of our young, American Blacks and Hispanics, for productive adult roles?

To be sure, unwise federal fiscal policies, a self-indulgent consuming culture, a sagging national spirit, and the lack of a pervasive public will to invest in the nation's human resources are more clearly to blame for the weakening of our country's economic foundations than education. But the improvement of all education must now become an issue as visible as the Sputnik challenger, or the United States, as we have come to know its standard of living, will inevitably sink into further decline. This is especially the case in these times when technological advances and global

competition require a highly educated citizenry; any decline in educational attainment must be cause for deep national concern. The current circumstance of the educational system in the United States in general, and the poor performance in educating minority students, in particular, is as much a threat to the national security as Sputnik was in 1957.

A focus on minority students and urban schools is justified by the demography of the future workforce:

1. Fourteen percent of all adults in the United States and 20 percent of children under seventeen are minorities. By the year 2000, one-third of all school-aged children will be minorities. These children and their White counterparts are already born; there will be no change in that simple demographic fact.

2. By the year 2000, almost 42 percent of all public school students will be minorities or other children in poverty.

3. Between 1985 and the year 2000, one-third of the net additions to the United States labor force will be made up of minority workers.

The Commission on Minority Participation in Education and American Life summarized that fact, in terms of economic self-interest, as follows:

Early in the next century, when the members of America's baby boom generation begin to retire, relatively fewer active workers will be called on to support far greater numbers of retirees. In 1987, for every 100 workers contributing to Social Security, 30 individuals were drawing benefits. By the year 2030, there will be about 50 beneficiaries per 100 workers. As indicated earlier, the workforce of that time will include a much higher percentage of minority workers than does today's. Americans of every background, then, have a stake in the competence, employability, and earning power of those future minority workers if we hope to provide for the income support and health care needs of an aging population.

There are other compelling reasons for America to renew its commitment to minority advancement. Many have discussed the issues surrounding the

United States hegemony in the global arena. We know that the majority of the world's population is Asian, Latin, and Black. The very credibility of America's claim that its system produces material wealth, social justice, and freedom is contradicted by the inability of the United States to demonstrate full equality and full participation for its citizens of color. Moreover, our failure to provide knowledge of other people, other cultures, and other languages leaves the United States operating its foreign policy initiatives in a cultural vacuum.

And finally, these continuing disparities between majority and minority citizens are a threat to the domestic tranquility and unity of a democratic society. The Kerner Commission, twenty years ago, raised the prospect of a nation "moving toward two societies, one Black, one White--separate and unequal." The prospect of domestic violence, fueled by drugs and despair, is even more frightening today.

It is true that when social institutions in this country have been responsive to the needs of Black and minority citizens, all citizens have benefited. We see that phenomenon most clearly in the schools; schools that are successful in obtaining high achievement for disadvantaged and poor students are demonstrably successful as learning sites for all students. Indeed, the benefit to the society in advancing Black progress has been that the society itself benefits disproportionately.

Among the features of public policy debate that I find encouraging is the emphasis on greater dialogue between schools and industry. Business has not only a self-interest in better school performance, but a clear sense of the kinds of skills and aptitudes the workers of the future require. That is how we know that technology, team work, a broader range

of higher level skills are necessary for the new worker. In businesses, too, we are beginning to see the adoption of early childhood development programs for workers' families. We all know the efficacy of pre-school education as a result of the success of Head Start programs. In the absence of full funding by the federal government, private sponsorship is a welcome development.

Similarly, the voice of private industry is urging greater attention to multi-cultural and international education. It may be that an understanding of global diversity might usher in a new recognition of the cultural richness that already exists in America.

We know there are successful programs to redress the variety of factors which place urban youngsters at risk. We also know dedicated educators will invent new ways to attack old problems from fresh perspectives. What must not be expected is a single answer, the solution, the definitive structure or approach to correcting our educational deficiencies and creating a tolerant, multi-ethnic society. As with all successful teaching and learning, success lies inherently in the effort to overcome our deficiencies.

EDUCATING TOMORROW'S WORKFORCE: A LEGISLATOR'S PERSPECTIVE

Ken Nelson
Chairman, Education Finance Committee
Minnesota House of Representatives

Few issues receive as much attention and represent as imposing a challenge to this nation's policy makers as the problems and concerns of America's students and education systems. Ask legislators and they will tell you that education is among the most significant concerns of their constituents. Elected representatives of the people have the immediate responsibility of providing appropriate policy and financial support for our public service systems. But we are also charged with providing a vision of leadership to act as agents of change who help to make public systems better and more responsive to the people. Therefore, legislators can never be content with simply maintaining the status quo. We must be active in our efforts to provide the best service possible for the present, and simultaneously offer the best foresight and initiatives to transform public systems to meet the requirements of the future. The perceptions or paradigms that we, as policy makers and change agents, hold and exercise must always be fresh in order to respond properly to the public's future needs and opportunities. How well we perform depends on whether or not we are trapped in old models.

Let me illustrate with a story. A young man from Southern California prided himself on how fast he could drive his Porsche around hairpin curves in the mountains. On a particular Saturday morning he was careening around

these curves with the utmost speed only to see a car coming toward him, going back and forth across the center lane at great speed. It continued to crisscross the lane until just as the cars met it stayed in its own lane. As the cars passed the woman driver shouted "Pig!" at the young man. Hearing this he decided to get even with her and shouted "Sow!" back at her. Feeling vindicated he stepped on the gas and careened around the next curve only to run into the pig.

The woman had tried to help him avoid an accident. But he was trapped in his old paradigm--if someone shouts "Pig!" at you they obviously are insulting you and one should get even. And the young driver paid the price. When parents, students, and employers shout "Change public education!" at legislators, we had better see the wisdom of their advice and break open our perceptions and restraints to create new opportunities for structuring and supporting learning. When dropout rates, illiteracy, and remedial needs are screaming at us, saying the system is not working, we had all better bust our old paradigms and together find new ways of educating and preparing the workers, citizens, and students of tomorrow. To achieve these common objectives we need to transform some fundamental traditions and practices in our society.

We Need to Transform Our Perceptions of Children From Being "At Risk" to Children "At Strength"

Every child has strengths, contributions to make, personality, resources, character, brains, emotions, body, and we are wasting them by not believing in them. Instead we call them "at risk." Let us hope they do not believe us and give up. To be so labeled is not a great way to build self-esteem, and

self-esteem is a principle ingredient in human development, especially for children.

When Gandhi tried to smash the old Hindu caste system he framed a new term for the "outcasts" of India. He called them Harijans, "Children of God." A recent issue of Newsweek, devoted entirely to families, referred to our children of poverty as outcasts. Has it come to this in America? Why not call these youngsters "Children of God" and treat them as such, in our policies, spending, expectations, and relationships? They might just prove to be worthy of our trust.

In the motion picture "Stand and Deliver," actor Jaime Escalante portrayed an actual California teacher who believed in his students so much that he pushed them with tough love to accomplish more than they, or anyone, thought they could. The students needed someone to believe in them, and they produced, they studied, they struggled, they grew, and they passed the Advanced Placement Test in calculus. They found what a lot of children miss, someone who believed in them and helped them to stand and deliver. Our American children, and they are our children, are not "at risk"; they are under siege. They need love, not labels.

We Need to Transform Public Systems to be Responsive and Supportive of Children and Their Families

After all, public institutions exist to better serve children and their families. In Minnesota, we have convened state legislators, commissioners of state agencies, and advocacy groups in a program we call "The Children's Academy" to make our legislative procedures and public services more collaboratively on children. I call it the "street and state"

approach where the street life, the real life of children and their families, has greater impact on the design of state policy. In Minneapolis, we established a Youth Coordinating Board for all public, non-profit, and private sectors to coordinate services for our youth. It is refreshing to see park and school board members working with the mayor, city council, county commissioners, state legislators, United Way, foundations, and business community to create a better future for our young people in the "2007 Project," a twenty-year plan started in 1987.

We offer thanks to the William T. Grant Foundation for its report, "The Forgotten Half," which not only documents the problem, but suggests solutions for adoption by our public agencies. And thanks go also to Lis Schorr for her book, Beyond Our Reach, which illustrates public systems designed around the people they are to serve, comprehensively and intensively. For my own commitment as a state legislator, I have adopted an idea that undergirds my legislative actions: every child will be actively engaged in a creative, caring, teaching-learning relationship with at least one adult who, with the child, best uses the resources of the home, community, and public services to fulfill the child's personalized, developmental learning plan. What children need most are long-term caring relationships, and we have to bend institutions to accomplish this. We need a children's policy in every state, city, and community, and certainly in the nation, to provide the best services possible for our most valuable resource.

We Must Transform Our Society into a Culture that Supports Learning, Working, and Education

Professional athletes, rock stars, and other entertainers as well as drug dealers do much better in the marketplace than teachers, researchers,

technicians, and laborers, and our young people know it. They know who is making big money, and as long as money is such a pervasive criterion of human worth in our society, youth will go after it, rather than entering those professions that would serve society better. Children only reflect what we publicly applaud and reward. If we change, they will change.

Dr. Benjamin Spock, in the October 30 issue of Newsweek, in an article entitled, "It's All Up to Us," argued: "In America many children get their values--consumerism, competitiveness and brutality--from television. No wonder our rates for violent crime are shockingly high....The rate of teenage suicide has tripled in the past 20 years....If we allow the strains of our society to worsen, then living here will be ever more painful. But if we realize that in our democracy we can control our society, by guiding our children and using our political power, we can turn all these disheartening trends around...ultimately the future of the family and of the society is squarely up to us." Ernest Boyer reinforced this in his work on behalf of education reform: "If a health epidemic were striking one-fourth of the children in this country...if we had heaps of garbage on the curb, a national emergency would be declared. But when hundreds of thousands of students leave school every year, shockingly unprepared, the nation remains far too lethargic." We must promote new cultural values and wake up the nation into being shocked at such happenings, shocked into action.

We Need to Transform Our Public, Private, and Non-Profit Competitiveness into Collaboration for the Common Good

More and more collaboration is happening in the country, such as this conference, which can showcase excellent examples of the public and private

sectors working together to improve American education. I commend the National Alliance of Business for their "Compact Project," which demonstrates the benefits of business-education partnerships, collaborations that realize the mutually beneficial goals of improving the education system and its students in exchange for employment opportunities and greater resources. One such specific project is the Minneapolis Youth Trust which grew out of two studies done by the Minneapolis Community Business Employment Alliance: "Preventing Unemployment: A Case for Early Childhood Education," and "Building the Work Force: Developing Youth Employability." These studies cemented collaboration commitments of business and education and led to further programs to improve the Minneapolis public schools.

As a legislator I have benefited from working with the Minnesota Business Partnership. Our legislative initiatives on "choice" are largely attributable to this program. Now the Minnesota Business Partnership is helping us look at accountability and assessment measurements for the public schools. We are realizing that we can work together with everyone to better serve the people; we are all increasingly aware that we can do it better collaboratively.

We Need to Transform Our Education Environment into Joyful, Challenging Places of Learning

Albert Shanker, president of the American Federation of Teachers has said, "If a company was turning out 90 percent lemons, we would rethink the whole production process. This is not a question of few recalls. The [public education] system is producing lemons." There is a synergy of

education reform taking place in this country that has never happened before. People are asking the right questions: "What is the purpose of public education?"; "How can we best do it?"; and "How can we know when we have done it?" If we follow these questions to their logical conclusion and keep our focus on students, we will have to engage in major restructuring of public education. And although it is happening everywhere, it must be maintained and intensified because otherwise the job will never be done. In Minnesota, we started with a mission statement that we put into the state statutes: "The purpose of public education in Minnesota is to help all individuals acquire knowledge, skills, and positive attitudes toward self and others that will enable them to solve problems, think creatively, continue learning, and develop maximum potential for leading productive, fulfilling lives in a complex and changing society." This student-centered statement enables us to leverage change in the system, not unlike a clear corporate mission enables a private company to transform itself. We have a major effort underway. I call it reform at the core. Although the many "choice" programs are helping to reform the system at the margin, this latter movement will redesign the system of public education around the learner, guided toward learner outcomes. It is also consistent with other restructuring efforts in the private sector, such as more shared decision-making at the building site where the service is offered. Public reform efforts can learn from corporate America how to deliver a better product. In fact, A Blueprint for Business on Restructuring Education, published by the National Alliance of Business, is an excellent document for both the education and corporate communities.

We Need to Transform Our Places of Work into Environments of Life-Long Learning

While Shanker is creating a new paradigm, the student as worker, we should also be creating a new model, the worker as student. Somehow we have developed a perception that after graduation a person's learning is complete. I understand that in Japan, business and factory cultures are permeated with an ethic of life-long learning. So should ours be. Future needs will require it and many opportunities will be lost without it.

We Need to Transform Our Roles as Public Decision-Makers into that of Transformation Leaders

In this context, we are all public decision-makers. Our organizations, be they public or private, will always need to change to respond better to people and society. But we are not prepared for such transformations. This is certainly true of state legislators. We have had very little if any training to be transformational leaders. To a great degree we are just reactors and not creators. We respond to political pressures as they come, but rarely do we transcend politics to transform systems. We need vision, but we desperately need training and skill-building to be the best transformational leaders that our country and our people deserve, even if voters do not demand it. Our public systems are gridlocks waiting to happen. I wait for some foundation to start a program that provides education for legislators to enable them to create and redesign public systems to better serve people and society.

I conclude with a story about two frogs who were hopping down the barnyard path one bright, sunny morning. Feeling rather adventuresome they

decided to jump into a bucket standing in the middle of the path, only to discover, too late, that it was half full of cream. They thrashed and thrashed about in their futile attempts to jump out until the larger frog said to the smaller one that he just could not jump anymore and sank beneath the surface and drowned. The smaller frog realized he had but three jumps to reach the edge of the pail. He kicked as hard as he could, but still fell short of the edge and back into the cream. He did it again. With one kick left he gave it his all only to have the cream finally turn to butter. He then stood on the solid surface and jumped to his freedom.

The frog unwittingly transformed his problem into his solution. As public and private decision-makers, we can knowingly turn our problems into solutions by transforming some fundamental paradigms and practices in our society today as we prepare the workers, citizens, and students of tomorrow.

EDUCATING TOMORROW'S WORKFORCE: A BUSINESSMAN'S PERSPECTIVE

Robert C. Holland
President
Committee for Economic Development

The Committee for Economic Development (CED) believes that developing more productive human resources is the single most important longer-run task our nation must master in order to regain and sustain its national competitiveness. All the technology, all the natural resources at our disposal will count for little without the human intelligence and imagination to put these tools to work.

But when we look at the new generation growing up, we are worried that they will not measure up. A large percentage of students now coming through the public education system will not develop the skills to make it in the mainstream. Those who fail to graduate from high school will be virtually disqualified from decent paying jobs. Nearly as many who do graduate will still lack the basic literacy skills and work habits they need to gain a secure foothold in the work force.

Those who are falling further and further behind are mostly the poor, members of minority groups, and children growing up in single-parent homes. In times past, we gave their problems little priority, temporized with them, or ignored them. Our economy has gotten away with this up to now partly because the demand for labor was strong and partly because unskilled manual labor and low-skilled manufacturing jobs were plentiful and well-paid enough to absorb people without higher-level skills.

We cannot afford to do this any longer. Our economy and society

cannot afford to waste human resources. Changing demographics are forcing us to rethink the way people are prepared for more productive roles in society.

Tomorrow's workforce will be significantly different from today's. It will be less White and less male. From now until the turn of the century, White males will make up less than 10 percent of net new additions to the workforce, while Blacks and Latinos and Asians will account for 55 percent. Yet this future workforce will have to support a significantly larger share of the U.S. population that will be retired. It will also have to function in an increasingly competitive global economy sparked by rapid technological advances. To succeed in meeting these challenges, our future workforce will need to be more highly trained, adaptable, and productive. Unhappily, if present trends continue, just the reverse will occur: there will be an ominous and growing gap between our workforce capabilities and our needs.

What should be done about this? How can we ensure that the next generation will be better prepared--not only for the workforce but as citizens, voters, and parents?

The Importance of Preschool Development

When CED first began to examine this question seven years ago, like many business people, we thought that young people could be better prepared for the workforce if we somehow "fixed" things at the high school level. As soon as we started to look at the research and the experience of educators, we realized that this view was essentially wrong. High school was much too late for most. For some, elementary school is too late.

The more we dug into the subject, the more we realized that in order to prepare people for a productive adulthood we have to start early, as early as possible in a child's development. It is both more humane and more cost-effective to prevent failure before it becomes an ingrained habit--before it becomes hereditary. The stakes are high, in both personal and societal terms. Dropouts cost society hundreds of billions of dollars in lost taxes and wages over the course of their lives.

The notion that starting early is essential for the 25 percent of children under age six who are living in poverty is becoming better accepted by policy makers, especially at the state level. Employers also need to begin to view this period of early childhood development, from birth to age five, as part of their long-range strategy for developing their future workforce.

Experts in child development know that education does not start with formal schooling. Education stems from everything a child experiences from the first moments of life and is a product of the interaction of the child with the adults around him. Early intervention and prevention are the keys to maximizing the proportions of our children who are born healthy and receive the physical, emotional, and intellectual nurturing in their early years so that they will arrive at school eager and able to learn.

CED's widely noted publication, Children in Need (1987), identified several early prevention strategies that are both effective and can yield significant returns on society's investment:

- . prenatal care for poor pregnant women;
- . parenting education and support, for both mothers and fathers;

- . health care and nutrition support for infants and children;
- . developmentally appropriate child care of good quality for at-risk infants and toddlers; and
- . quality preschool programs for three and four year olds.

A great deal has been said about preschool education in the past few years. The evidence on its benefits is solid. Every dollar invested in quality preschool saves society an estimated six dollars by lowering the costs of remedial education, teen pregnancy, welfare dependency, and crime. Cost savings aside, Head Start produces adults with more self-confidence, better academic skills, who are more likely to further their education and become productive members of society.

After all these years of proving its worth, Head Start, which is the primary public program delivering this kind of quality preschool experience for disadvantaged children, will celebrate its 25th anniversary in 1990. Nevertheless, it still receives only enough funding to serve less than 20 percent of all eligible children. We should make it a priority to fully fund Head Start as soon as feasible. The request for a 25 percent increase in funding submitted by President Bush as part of the Excellence in Education Act is a good start, better than we have seen in years, but it must be followed by a more aggressive funding strategy within the next few years.

Restructuring Schools and Their Environment

Early intervention can put a child on the right road. The next step must be to improve the education that all our children receive in school. The benefits to a child of a good early start may be wiped out if the schools he attends fail to provide an effective environment for learning.

In Investing in Our Children (1985) and Children in Need, CED called for broad-scale restructuring of the schools, with an emphasis on bottom-up reform at the school-building level. We urged that "nothing less than a revolution in the role of the teacher and the management of the school" will do. Teachers should have stronger professional roles, and we must ask school personnel for greater accountability. We also urgently need to find more creative ways of expanding the pool of qualified teachers, particularly minority teachers.

CED also recognized that not all the necessary changes can be made at the school-building level, and not even at the school district level. Much of the enabling legislation and funding allocations must be made by lawmakers at the state level. The federal government can also contribute to this process by loosening some of the regulations governing the use of federal funds that hamper their wise and effective use. For example, it requires action by the federal government to allow computers bought for an elementary school Chapter 1 program to be used in the evening for adult literacy classes. One of the most significant results of the recent Education Summit at the University of Virginia was the clear recognition of this problem and an agreement between the president and the governors to lower federal regulatory barriers in education.

CED's work in education also has made it clear that schools cannot be reformed in a vacuum. Problems of poverty, crime, drugs, and single parent homes, which severely affect the development of young children, do not miraculously evaporate once a child starts school. Restructuring of schools, therefore, can only be fully effective if we also make related improvements in the social welfare, health, and economic policies that have

an impact on the welfare of children and their families.

The potential synergy among all the programs designed to help various parts of the child development process is very important. This is one of those areas where the whole is definitely greater than the sum of its disparate parts. How to do it? One example: in Children in Need we advocate the development of the "community school," in which the school becomes the hub of the community, and human services, where needed, can be delivered from the school building site to the children who attend the school and to their families.

Parents must be brought more fully into the education process as well. There are few successful examples of reform that have not included parents in the process. Business has an important role to play in supporting parents' efforts to take a more active role in their children's education. For example, companies can provide release-time so that parents can visit their children's teachers or take part in school functions during the school day. Companies can also help local schools by publicizing events and providing information about them to parents through such means as company newsletters. And companies can emphasize the importance of education through their active corporate involvement in schools and education policy issues. Those are some of the changes we see needed in the structure of schooling. What about the content?

Education Content and Goals

As part of the research for Investing in Our Children, CED conducted an extensive survey of large and small employers and college administrators to find out how large a gap there was between school-imparted skills and

the skill requirements of entry-level jobs. The gap was judged to be wide, not an unexpected finding. What was very interesting, however, was the list of skills that employers felt were lacking in high school graduates. Few employers were concerned with specific vocational skills. It was clearly the general learning and working skills of the students that were considered inadequate; these included skills such as the ability to communicate in the English language, both written and spoken, the desire to do a job well and work as part of a team, the ability to identify and solve problems, and the ability to continue to learn. Employers were in agreement: if these general learning and working skills were in place, specific vocational skills could be taught. Interestingly enough, when college administrators were asked to identify the skills that college students needed to be successful, they produced almost the same list.

What this survey demonstrated was that schools need to teach differently. They need to focus more on learning and problem-solving skills. They also needed to pay greater attention to what our publications called the "invisible curriculum." The "invisible curriculum" is all the messages that children are exposed to day in and day out, messages that tell them what adults value and reward. If adults do not value effort, achievement, self-worth, self-discipline, sensitivity to other people, and other positive traits, then there is little incentive for children to value them. The "invisible curriculum" pervades our schools, our homes, the media; it pervades the way to do business. We have to pay more attention to what we teach children through the way we, as adults, treat one another.

To guide and coordinate an evolving nationwide effort at school reform, we need a clearer and broadly accepted set of objectives. The

results of the fall, 1989, Education Summit between President Bush and the nation's governors was heartening, if only because it demonstrated that there is now a national consensus building on this and three other key issues in education reform. One is that the schools need to be fundamentally restructured, not just patched up. Second, that schools need to be held more accountable for their results. And third, that the federal and state governments need to lower the regulatory barriers that often inhibit real change.

Business leaders are also calling for this agenda. The newly created "Business Coalition for Education Reform" which I co-chair with William Kolberg, President of the National Alliance for Business, recently issued a joint statement urging a national effort to articulate the goals of public education and the strategies for achieving these goals. We also stand with the president and the governors in calling for greater parent involvement in the education and development of their children and a broader professional role for those on the front lines of education--the teachers.

The eight major business organizations that issued the statement believe strongly that if we are to provide an effective quality education for all students, we must know what they are being educated for, what standards should be applied, and how we can best measure their accomplishment. We are willing and eager to work with the president, the governors, educators, and others on the state and national levels to help develop these goals and strategies.

What is At Stake?

In my remarks thus far, I have emphasized the economic and

demographic dimensions of this education issue because that is what I know most about. But my colleagues at CED and I also clearly recognize that this is not only a huge economic problem, but also a dire threat to the social fabric and a human tragedy of major proportions for the children involved.

We believe that it is more important than ever to act on the knowledge that our children are our future. If we fail to nurture and educate all of our children, we will be closing the doors of opportunity to a growing number of young people and excluding them from the mainstream of American life. The cost of failure is enormous, for at stake is the survival of our free enterprise economy, our democratic system, and the American Dream itself.

WORKFORCE LITERACY: NARROWING THE JOB-SKILLS GAP

Forrest P. Chisman
Director, Washington Office
Southport Institute

The changing workplace is demanding higher order skills of entry-level workers, from bank tellers to machine operators, because of innovations in computer technology, robotics, and systems of authority. The "quality movement," "just-in-time" delivery systems, and a focus on satisfying the customer have pushed decision-making authority down the chain of command, thinning out the ranks of managers and supervisors and making the worker on the line responsible for on-the-spot decisions and participation in teams of problem solvers. And the demographics of the baby-bust generation mean that we cannot depend on young workers to fill all these jobs. Older workers must be trained and retrained.

These and other developments are creating what is often referred to as the "job-skills gap"--a story that is familiar to all who watch the headlines, and that has been well documented by Workforce 2000 and numerous other recent reports. What is not well documented is what the nation is doing and could do about this gap. In the past, corporations and the federal government have been able to close isolated skills gaps in particular regions or higher level occupations by offering higher wages or subsidizing professional education or training. But this time the skills gap is across the board, in all sectors of the economy and most regions of the country. The old solutions would bankrupt the federal budget and smother national productivity.

This time, the job-skills gap requires new solutions. The population of adults with limited basic skills is not only ill equipped for changing jobs but also ill prepared to learn the skills needed. Indeed, many employees complain that even graduates of high school equivalency programs are not necessarily "trainable" for today's jobs; before they can enter job-specific training, they need to improve their basic skills.

A new term has entered the literacy lexicon in the 1960's: workforce literacy or the basic skills needed to function effectively in today's economy. The term is broadly defined to include five basic competencies (reading, writing, communicating in English, math, and problem-solving skills), along with the ability to work and learn independently, work cooperatively with others, respond quickly and flexibly to new situations, juggle multiple tasks, and decide what one needs to know and then to find the information--in other words many of the abilities and attitudes traditionally considered necessary for managerial and technical jobs.

A panoply of new provisions in federal law targets workforce literacy instruction, in the form of basic skills and "employability" services, to the unemployed portion of the lower skilled workforce. In general, these provisions bode well for this group. But they neglect the "forgotten half" of the adult literacy population: those who are employed, but whose basic skills do not meet the needs of the economy of today and will surely be inadequate in the years to come. By most estimates 10 to 15 million employees have seriously deficient basic skills, and most are low-level, marginal workers--the working poor or near-poor.

This group ought to be a high priority for both government and employer intervention; its members are already performing their jobs at

some level of competence, and retraining them is a better option for their employers--and collectively speaking, for the nation's economy--than hiring replacements. But workers with deficient basic skills have not yet received the benefit of the nation's concern about the job-skills gap.

The Promise

The good news about workforce literacy is that awareness of the problem appears to be high, a large number of fledgling efforts to come to grips with it have been launched, and measures required to provide basic skills instruction to people who are employed should be within the grasp of the adult literacy field. The bad news is that, with a few exceptions, this awareness has not been translated into programs that in fact offer the types of advanced workplace literacy instruction that will provide substantial benefits to either employees or employers.

In the last few years there has been a great deal of breast-beating about the job-skills gap on the part of both corporate and government leaders. Chief executive officers have vied with one another in ticking off how many job applicants they have had to reject for lack of basic skills or how concerned they are about the skill levels in their own workforce. Political leaders have waxed eloquent about the problem, as have leaders of organized labor and some leaders of the education community. In 1989 at least a dozen major conferences sponsored by government, business, labor, and private research institutions focused on some aspect of the workforce literacy problem. In a rare collaborative effort, the Departments of Education and Labor issued joint publications (one with Commerce as well) about the job-skills gap and workforce literacy in 1988,

adding to a growing stream of print material that includes newspaper stories, a special edition of Business Week magazine, and specialized publications by unions, business groups, and literacy leaders.

This growing awareness of the workforce literacy problems has not been without result. A 1987 survey of basic skills programs for employees conducted by the American Association of Adult and Continuing Education (AAACE) found more than 100 programs in companies scattered across the United States, and many more have developed since that time, as documented on a quarterly basis in the BCEL newsletter. The Departments of Education and Labor have awarded more than fifty grants in the last two years to public and private organizations for demonstration projects in workforce literacy. Unions have negotiated at least a half-dozen major collective bargaining agreements with corporations (including the three leading automakers) that require the provision of basic skills service to their members. Community colleges, vocational centers, and other literacy providers have contracted with companies to provide literacy instruction, and several major publishers in the adult literacy field, as well as some newcomers, are preparing workforce literacy product lines.

Happily, these developments converge with the evolution of both theory and practice in the adult literacy field. Among the long-standing concerns of the field have been how to motivate learners to participate in programs, how to handle the logistics of bringing the learner to an instructional site on a regular basis, how to find suitable times for instruction of adults who have other responsibilities, how to insure that learning actually makes a difference in improving the lives of learners, and how to find appropriate sponsors for adult literacy programs.

In recent years many literacy leaders have concluded that the answer to all of these questions is some form of "contextual" or "competency-based" instruction. This concept is the result of a long evolution of learning theory and experimentation. Simply explained, people are more likely to be motivated to learn, and to learn more quickly, if they are learning for some clear purpose: to be able to achieve some goal, perform some task, or solve some problem that is important to them. The logical extension of this idea is that literacy instruction can be most effectively delivered if it is presented as a way of achieving some individual purpose, if it is delivered in the location where people actually need to apply the skills they learn, and if the materials used are customized to meet that need.

Many leaders of the literacy field believe that contextual learning should become the norm of the workforce literacy field. This would be a major change from current instructional approaches. Today most literacy instruction uses generic materials that have been designed to achieve goals exactly the opposite of those of contextual learning. That is, the materials developed by most major educational publishers and most widely used in the field are designed to be applicable to anyone with limited skills in any circumstances, and they are usually employed in specialized learning centers that have no close ties to other activities in which learners may be engaged. Although individual instructors often try to customize the materials, they are handicapped in the effort by a product that is designed for general-purpose applications.

Many leaders of the literacy field believe that this generic approach to instruction is inadequate. They believe that the problems of motivation, logistics, time, and relevance can be overcome only by more

widespread use of contextual approaches. Otherwise, it will be far more difficult to meet the needs of 20 to 30 million adult learners in a timely and cost-effective way.

The Model

Whether or not these larger claims are true, the military experience, together with other evidence and theory, indicate that contextual learning approaches could be easily applied to the workplace environment and that large learning gains may be achievable. In short, workforce literacy should be an easy case for adult literacy instruction provided that four rules are observed: (1) instruction must take place at the workplace; (2) it should be sanctioned and encouraged by the employer; (3) it should make use of materials that are clearly relevant to the work or other employment issues (such as understanding fringe benefits) that employees have in hand or are likely to face and that employers care about; and (4) both employers and employees are able to reap some tangible benefits from learning. For employees the benefits might be doing their jobs more effectively, eventually gaining promotions, or, in firms undergoing rapid technological change, being able to keep up with job demands and staying employed; for employers it might be increased productivity, higher profits, or a more satisfied workforce. If these four conditions are met, large learning gains are achievable through workforce literacy. Both employers and employees will turn out winners; and at least one form of adult literacy instruction will find a major sponsor among employers interested in enhancing productivity.

The Reality

One might expect that the convergence of heightened awareness of the job-skills gap, the increased activity surrounding workforce literacy, and developments in the literacy field would generate competitive programs to solve the workforce literacy problem in corporate America. Unfortunately, this is not the case.

In the last couple of years, most of the corporate leaders who have been outspoken about the job-skills gap have concentrated their energies primarily on school reform, not on adult literacy. The vast majority, in other words, are neglecting the fact that three-quarters of their workforce in the year 2000 will be today's adults, and the same can be said about most government leaders.

Moreover, although a large number of workforce literacy programs have been launched in recent years, most reach only a small number of workers and are quite limited in their goals. The projects identified by the AAACE survey cover at most only a few hundred employees, and most of them reduce to little more than allowing providers of conventional, generic basic skills services to set up shop on corporate premises. Few develop or implement contextual learning systems, and few indicate a willingness on the part of the employer to provide release time for instruction, incentives for participation, rewards for success, or any of the other elements that recent developments in the literacy field suggest a successful workforce program should have.

The federal demonstration grants have initiated some interesting experiments in learning software, collaborative efforts, and program design. But the grants have been small (on the order of a few hundred

thousand dollars each) and limited to one or two years in duration; thus, the projects have been on a small scale and of limited value beyond their immediate context.

Only a handful of companies have implemented more fully developed workforce literacy programs. Their executives often say that these programs are part of a broader commitment by the company to lifelong learning for all employees. They believe such a commitment is required to remain competitive in today's economy, but it has required a top-to-bottom transformation of corporate culture and operations.

But while leading-edge companies are pointing the way, few others are following. At most a few tens of thousands of workers nationwide are being served by workforce literacy efforts of any sort, and the numbers served by programs meeting state-of-the-art standards are far smaller.

Sources of Inertia

Why this inertia? A series of reasons suggest themselves and also offer guidance in mapping out a campaign for workforce literacy programs.

"Leave It to the Public Sector." Employers tend to view education as a public sector responsibility, especially when numbers of 20 to 30 million adults are bandied about. Employers know that significant funds for adult literacy education exist in the public and not-for-profit sectors and wonder why they should have to contribute themselves. Another common allegation is that the lower tier of the work force is highly mobile. Employers, particularly small firms, say they cannot make significant training investments in workers who are likely to take their newly learned skills to another employer or, worse yet, a competitor. Finally, an

important corollary to the public sector argument is that education is ultimately the responsibility of the individual learner.

Yet at the same time, the United States employers are spending between \$66 billion and \$175 billion on employee training annually, of which \$30 billion goes to external training contractors, according to recent American Society for Training and Development estimates. Employers obviously are willing to spend large sums on upgrading the competencies of their employees, if they consider that the employees are already at an ability level at which they can benefit from the training. Indeed, the ASTD study shows that most training dollars go to managerial and technical employees; only an infinitesimal percentage goes to basic skills education. Moreover, other recent evidence suggests that the mobile worker theory may be a fallacy. Vaughan and Berryman indicate that workers trained by their employer tend to be less mobile than others.

The Workforce 2000 report showed that the job-skills gap will continue to widen over the 1990's, and this fact will eventually force more employers to take the issue seriously and extend more training dollars down the occupational ladder. Until then, though, the opposite argument will continue to hold sway with many.

We Don't Have the Problem. Many employers in fact have not yet witnessed the job-skills gap first-hand, certainly not on a large scale. Some may acknowledge that it lies around the corner for them, but, as many commentators have lamented, American business suffers from considering only short term profit margins. Although the cost of upgrading their capital equipment can be almost an obsession, employers are willing to accept low productivity from the lower ranks of their work force. They are also

willing to offer higher wages to attract workers in short supply--up to a point.

"We Have Alternatives." And so they do. Outsourcing is one, whereby the corporation subcontracts its production or service-creation to firms in other parts of the country not experiencing a labor shortage or to overseas firms with labor surpluses and low wages. This "hollowing" of the corporation can work well for individual firms. But the job-skills gap means that, without a major intervention to achieve adult literacy over the next decade, many employers will be hard-pressed to find other domestic locations for their production. Furthermore, carried too far, outsourcing would leave us with massive unemployment and a two-tiered society made up of the haves and the have-nots, an unacceptable alternative to most Americans.

Another option pursued in recent years has been to invest heavily in technology. Technological innovation, from robotics to statistical process control, has in fact been a success in the manufacturing sector, making productivity gains there much larger than in the service sector. But while it has lowered the demand for absolute numbers of workers, it has also increased the demand for workers with higher levels of basic skills.

Those employers that have downsized their employment levels through outsourcing or technological innovation have retained the cream of the crop of their former workforce, laying off the rest. And many of the larger corporations--not only the ones offering the highest wages and benefits but also those most able to initiate workforce literacy programs--have the luxury of skimming the cream of the lower skilled job candidates. In so doing, both of these groups of employers will come to recognize the job-skills gap only when they have trouble replacing retiring workers or

expanding their facilities in this country.

"Show Us the Product." For those employers who have reached the limits of the benefits to be gained from these alternatives, for those struggling to close their own job-skills gap, the question is where they can find an effective training product: a literacy program or curriculum that can teach their potential job candidates or current employees the literacy skills they need to function effectively in the workplace. In demanding "Show us the product that has taught or can teach these skills," employers looking to narrow the job-skills gap for their own firm can look neither to the adult literacy system nor directly to vendors of instructional materials. Although the current system serves an estimated 3 million adults each year with some form of literacy instruction, it cannot promise employers that after completing the largely academic curriculum, the learner can make good use of computer files, business documents, and safety manuals (roughly equivalent to the skill level Workforce 2000 estimated will soon to be the average job requirement).

The employers cannot turn directly to the vendors because the literacy field is far from having reached consensus on performance standards for adult literacy in general, let alone for workforce literacy. Unfortunately, contextually based materials are still not fully developed or widely available.

Employers simply cannot be expected to invest in graduates of the adult literacy system who cannot demonstrate functional workforce literacy skills, unless, of course, they can identify a product or service that will efficiently and effectively improve workers' skills once they are on the job. And at least one other source of inertia remains as well.

"Whose Goals Will Be Served?" Employers and unions who embark on a workforce literacy initiative may face some serious negotiations over the issue of goals. On the one hand, the employer may be unwilling to pay for training that is not necessarily of use on the current job. If so, the employer's goal will be job-specific training, possibly with supplemental basic skills training offered as required. On the other hand, the union is likely to view workforce literacy through the lens of the larger labor movement: as a means to prevent the skills obsolescence that was the lot of many union members during the 1980's. Indeed, representatives of labor have been vocal in their distaste for the idea of limiting workforce literacy to job-specific skills training. The local union's view, then, may be that workforce literacy should give workers the broader skills they need to adapt to the changing workplace over the long term.

In nonunion settings the initiative for a workforce literacy program will likely rest solely with the employer. But even in this case, disagreement over goals may still surface between top management and human resources departments. In both union and nonunion settings, however, differences of opinion need not delay the initiative indefinitely. Indeed, the blueprint for a successful program will be the agreement that results from the parties' honest airing of these differences.

The present inertia holding back the expansion and refinement of workforce literacy service is unlikely to be overcome by some dramatic step on the part of employers, employees, unions, government, literacy providers, or any of the other interested parties. A national incremental strategy enlisting the efforts of these and other stakeholders in workforce literacy will be required.

AN OVERVIEW OF POLAROID'S TECHNOLOGY READINESS PROGRAM

Acquanetta C. Farrell
Director, Technology Readiness Program
The Polaroid Corporation

When we at Polaroid's "Technology Readiness" program are asked to describe our basic skills program, we say it is a dynamic process consisting of a set of fundamental beliefs and assumptions, a set of invariant operational procedures, variable delivery systems, and checks and balances that allow us to calibrate and maintain a consistently high degree of quality in the services we offer.

These provide us with the framework necessary to achieve our primary objective: a literate, numerate employee who is a critical thinker, a creative problem solver able to function effectively as a member of a culturally diverse team responsible for manufacturing the company's product. Therefore our program, the specific courses we offer, the particular delivery systems we utilize are not static, but ever changing within the context of work as it is constantly redefined by Polaroid forces as well as factors outside the company's domain.

Our interactions with employees are also guided by several fundamental beliefs and assumptions. These include an approach to people as employees which:

- . recognizes the dignity and worth of every individual;
- . defines all operational terminology so there can be agreements regarding its usage;

- . emphasizes education theories that take account of multiple intelligences, learning styles, methodologies which facilitate skill acquisition, and multiple instruction in a single classroom;
- . provides opportunities for employees to practice and demonstrate the newly acquired skill and/or behavior.

The Polaroid education program grows out of the assumption that we work with intelligent adults. We know, however, that the competence of our workforce is incomplete and its training and improvement require a concentration on several principles:

- . intelligence and literacy are not the same;
- . intelligence and numeracy are not the same;
- . literacy and numeracy have functional contexts;
- . employees' product knowledge is a valuable corporate asset.

We have identified a continuum of skills in reading/writing, math, science, critical thinking/problem solving, and communication necessary to do work in Polaroid, but we do not feel obligated to use any particular configuration or time frame for addressing them to the exclusion of all others. It might be that one term we offer a course called "General Math" in a twelve week cycle for forty-eight hours of instruction covering topics from numeracy through percentages. Another semester we might offer the same course as well as a three week, twelve hour workshop which addresses some subset of skills contained within the previous General Math course. Another example is a thirty-six hour, twelve week Intermediate Math course available with an eighteen hour, twelve week independent study in the same subject. In each instance the courses, their general subjects, particular content, as well as the amount of time for each offering, are functions of

the work experience the participants bring into our program.

We have about thirty courses that we offer through a continuously updated brochure and define as basic skills. These range from General Math to Calculus; ESL I to Technical Writing, depending upon the requisites of an employee's work. The skills curriculum also includes four offerings in Physics, three in Chemistry, classes in team development, and a program of study focusing on critical thinking/problem solving. Employees have to participate in entry and exit qualifiers for these courses, and their educational histories are maintained within a Technology Readiness data base not linked to any other computer in the company.

Only employees can request their records, although we do provide skills' profiles to supervisors and managers. These are simply graphical percentile representations of the content skills possessed by employees within a department or division. Unless otherwise determined by employees and managers, all participation is voluntary and we are able to provide information only for those employees who have elected to use our services. Attendance is the only information about an employee's participation that is freely shared and people are apprised of this fact before they enroll. Employees receive a certificate following successful course completion. Course codes are: CP-completed, passed; ID-incomplete, dropped; IN-incomplete, no show; IM-incomplete, make-up necessary; OG-ongoing. An individual is allowed three opportunities to complete a course successfully.

Ninety-five percent of the courses are on company time. They are offered at every company site and on all work shifts. We allow no more than seven students in a lab course. We also do one-on-one tutorials when a special need exists. All participants evaluate our courses and our

instructors. Instructors evaluate the progress of students and make recommendations about the type of educational experience best suited for the student. We use the results of students' responses at comprehensive program evaluation meetings held in August. These annual reviews permit us to determine what has worked well, what needs to be deleted, added, or altered.

Employees can elect not to attend courses and to complete course requirements through self study. Sample assessments, solution manuals, and recommended work sheets are available for all courses because employees are frequently intimidated by the required tests of their subject mastery. Completion by exam is denoted as "CE" and allows the employee to use the "CE" as a qualifier for higher level courses. The assessments used in these instances are different from those used for course completion by individual instructors. Teachers are able to measure student performance on the basis of many hours in a classroom and examinations which are not limited to a one-time assessment of those individuals who never enrolled in our formal classes.

We often receive special requests from managers or supervisors for educational assistance in a particular department or division. This broad category of interventions is known as our "brokered process." Through a system of trial and error over the last twenty-five years, we have identified the steps which seem to ensure maximum voluntary participation by employees. It is predicated on the belief that adults do not like and will not readily participate in any venture, no matter how benevolent, if they are not part of the process from the beginning. Our brokered delivery system is a collaborative effort among the site or home Training

and Development staff, the corporate Technology Readiness staff, and the specific department and/or division. When a manager calls for assistance, the preliminary meetings are utilized for information gathering as well as time to describe the steps in our specially designed curriculum. After we have come to agreements with the managers about their roles and responsibilities in the brokered process, we schedule meetings with supervisors, members of the Employees' Committee, and all employees to explain the nature of our work and how employees might use it to their benefit. We then perform a Job/Task Analysis of all job families within the department or division with the intent of identifying the fundamental set of skills in reading/writing, math, and communication necessary to do the work within each job level.

The Job/Task Analysis is performed by members of the Technology Readiness staff. This team is comprised of specialists in all areas. They collect examples of all written materials, interview a cross section of employees, research available information on the topic from other sources, and compile a Job/Training Analysis profile which is presented to all employees. Employees are asked if the information accurately reflects the work they do and, if necessary, an amended version of the profile is completed. The next step in the process is to develop assessments in the content areas based upon the findings. Sample assessments and solution manuals are created and provided for employees. Assessments are scheduled and administered in conference areas at the employees' work sites by Technology Readiness resource specialists. The ratio does not exceed ten employees to one resource specialist. After assessments have been scored, the results are tabulated and presented to management with educational

options recommended. Simultaneously, one-to-one assessment informational meetings are arranged and the results shared with employees by the resource specialists. The intent here is always to focus on what the individual knows and has mastered. No reference is made to grade level, for that is a concept without context in our work environment. Since the Job/Training Analysis looks at the job not only as it is presently defined but also as it might be defined in the near future, individuals for the most part do not perceive themselves unfavorably simply because they may not have answered all questions correctly.

Costs for educational options are based upon the specific needs of the requesting groups and vary according to the level of intervention necessary to address the functional deficits. When agreements have been reached regarding the type of intervention required and contracts for cross charges signed, a Technology Readiness project manager is named and a team is assembled from the staff to provide the services. The team meets regularly as an internal group for support, with supervisors to advise them of progress and solicit their assistance in transferring classroom knowledge to the work place, and provide status reports to managers.

The Technology Readiness staff is comprised entirely of consultants. The core staff of twelve work anywhere from twenty-five to forty hours per week. The team has developed a peer review process for evaluation in all functional areas. There is also a peer coaching procedure individuals may utilize when they wish to expand their areas of expertise. This includes apprenticing to a master for a period of time and being funded for this apprenticeship through the corporate budget. There is an orientation process for new staff members which includes a probationary period of

approximately six months. During this period, new staff are given the opportunity to take on increasing responsibility.

The brokered percentage of our work has increased during the four years the present program form has existed. In 1985, 90 percent of our work was course driven with only ten percent derived from brokered projects. In 1989, more than 55 percent of our work is generated from special requests. As the corporation becomes more aware of the relationship between functional literacy and competitive viability, we anticipate an ever increasing demand for these basic skills services.

TEACHING WORKPLACE BASIC SKILLS AT AETNA

Ira Mozille
Senior Education Advisor, Aetna Institute
for Corporate Education
Aetna Life and Casualty

In today's constantly changing business world, upgrading employee skills is a critical factor for success. Forces such as deregulation, intense competition nationally, as well as internationally, burgeoning technology, and the shifting emphasis from product-driven marketing to customer-driven marketing are transforming the way Aetna and other American financial service corporations conduct their business. In response, Aetna is encouraging its employees, across all organizational levels, to think critically, divergently, and creatively; to anticipate and react positively to change; to formulate sound business objectives, implement action plans, and monitor the results; to resolve abstract business problems both independently and as part of a team; to locate sources of information, interpret complex technical data, draw conclusions from facts, spot trends and propose solutions; and to coherently communicate ideas verbally and in writing. Of value to Aetna is the extent to which these high level skills foster the employees' skill transferability across multiple work settings. Serving these intellectual and educational competencies is of the utmost importance in Aetna's quest for business success.

We know our employees must first have a good grasp of the basic skills of reading, writing, speaking, and listening. But the development of these abilities is impeded by two disturbing trends: the predicted drop in the

number of entrants into the labor pool and the declining skill levels of the workforce. Thus, basic skill development has become a business issue as American corporations strive to close the gap between employee qualifications and greater job demands.

In January, 1988, as part of Aetna's comprehensive staffing initiative to close the gap between employee qualifications and greater job demands, Aetna's Institute for Corporate Education formally opened the Effective Business Skills School, a workplace basic skill development program for current and prospective employees. Simply put, the school's primary objective is to produce an internal pool of candidates who qualify for jobs that require high level skills. To accomplish this objective, the school's curriculum integrates skill development in learning, reasoning, reading, writing, listening, speaking, mathematics, and computer operations within an individual and functional context.

This type of training is quite different from Aetna's traditional corporate training practices in several respects. First, the benefits to Aetna are more long term than short term with employees who are now able to master more than one job assignment in their years at Aetna. Our corporation's goal is a developmental staffing strategy. Second, the student population is diverse. The students may be prospective or current Aetna employees, entry level applicants, uprooted from manufacturing, or foreign-born. They may have an erratic education/employment history as well as remedial needs in reading, writing, and mathematics, or may simply be in need of skills to fill new job demands within our business structure. Often, the students barely meet the qualifications for hire, live at or below the poverty level, and generally feel alienated and disenfranchised.

In many cases, the students are unaware of the expectations of the workplace, lack self-confidence, and fear failure as the result of previous learning experiences. In addition, they may not know what educational skills to develop, in what sequence, and why, and may be unprepared for the rigors of an intensive corporate training program. Yet, most students tend to be highly motivated, intelligent individuals who are quite willing and able to learn.

In response, the school embraces a purely learner-centered environment that draws from the students' accumulated knowledge base and experiences and respects their needs, expectations, and values. Through a reiterative instructional process of dialogue, inquiry, application, and reflection, students generally follow a four-step sequence:

First, students strive to enhance their self-concept by examining their reasons for learning; by confronting their learning anxieties; by exploring the business of financial services; and by recognizing their contribution as employees, their options for growth, and maximum potential. Second, students determine their skill levels by self-assessment, supervisory review, Aetna criterion-referenced tests that measure competency in reading, writing, and mathematics, and other examinations that measure aptitude and potential. Third, they create and continually refine an educational plan that reflects individual needs and access to a variety of learning modes including small group workshops, self-paced courses, independent study, collaborative learning, and tutorials. Fourth, students apply the basic skills to real job tasks and simulated business cases.

Of critical importance is the extent to which students learn how to learn. We want our prospective employees to identify their own needs,

select strategies to meet those needs, and monitor their progress on a continuing basis. At the core of our educational program is a set of questions that guide students toward a better understanding of themselves as learners:

What skills do I wish to develop?

How do I feel when I approach learning?

Am I satisfied with the learning approach I have selected?

What types of learning activities do I prefer?

What types do I avoid?

Am I an effective learner?

If not, what can I do to improve?

When I am faced with an obstacle to learning, what do I do? Does this work?

How do I know that I am learning?

What am I supposed to be able to do after reading or listening to learn?

What specific questions will help me get there?

How do I know that I am understanding the content along the way?

How does the content relate to what I already know?

How does it relate to practice?

Do I agree or disagree with the content?

Can I demonstrate my knowledge of the content?

The cornerstone of the school's methodology draws its strength from theory and practice that spans five distinct but interrelated disciplines: adult literacy, adult learning, metacognition, organizational behavior, and sociolinguistics. In particular, Stephen Brookfield, Benjamin Bloom, Paulo Freire, David Harman, Malcolm Knowles, David Kolb, Carl Rogers, and William Julius Wilson provide useful models.

Aetna's Effective Business Skills School is only one model for closing

the gap between employee qualifications and greater job demands. Beginning with the individual needs of students to ultimately address the functional needs of the company, the school stretches the definition of workplace basic skills beyond reading, writing, listening, and speaking skills to include learning skills. For it is the self-directed, lifelong learning skills that will prepare employees for a business environment characterized by change.

THE UAW-FORD EDUCATION, DEVELOPMENT AND TRAINING PROGRAM

Bill Schaffner and Tony Procter
Associate Directors, UAW-Ford
National Education, Development
and Training Center

People who think and write about the American economy use the automobile industry as a case study of the nation's most severe business challenges. The negative lessons drawn often point to a process of decline in which the antagonism between union and management is a fundamental cause of the industry's competitive debacle. What some commentators ignore are the indications of renewal that are transforming American car manufacturing. One of the most hopeful signs of change is the United Auto Workers-Ford Motor Company "Education, Development and Training Program" (EDTP), first established by collective bargaining in 1982.

No doubt the general public would be surprised to learn that for almost eight years union and management at Ford have recognized their common obligation to promote the company's competitiveness while attempting to secure the well-being of the entire workforce. The EDTP was a key feature of this commitment with its comprehensive approach to worker education, training, retraining, and personal development. The success of the EDTP has led to its strengthening and expansion through succeeding labor contracts negotiated in 1984 and 1987. The UAW and Ford are participants in one of the most remarkable industrial partnerships in education history.

The major components of the EDTP have by now involved thousands of

workers and cost more than \$100 million. We are fortunate that our focus today is primarily on active employees, though we still retain programs for dislocated, laid-off workers. The UAW-Ford Agreement created the following successful "Avenues for Growth" under the EDTP umbrella:

Life/Education Planning Program. This approach makes available on-site, professional Life/Education Advisors, who assist and provide opportunities for individuals or groups of workers to assess their personal and work interests and develop educational/career plans to accomplish their goals. There have been more than 121,000 advising sessions with hourly workers.

Skills Enhancement Program. This program makes available specific instruction in such skills areas as mathematics and reading comprehension to assist workers in college courses or technical training, high school completion, or general skills building. The instruction offered is self-paced and provided in the work sites. Every worker enrolled is given individual counseling designed to help workers master new skills and achieve their own personal educational goals. The program extended its services to spouses of the workers at seven pilot locations in September, 1989.

Education and Training Assistance Plan. UAW and Ford make available under this plan up to \$2,000 in prepaid tuition and fees for worker enrollment in courses of study at approved educational institutions. This popular concept has given tuition assistance to over 38,000 individuals. There is a corresponding Personal Development Assistance Program, which also offers prepaid development and training options limited to \$1,500 for non-credit and non-degree studies, such as communication skills, computer literacy, motivation, and personal growth assistance.

College and University Options Program. This is an innovative opportunity for workers to continue their formal education. The program centers on prepaid tuition programs in conjunction with accredited institutions of higher learning which are offered at participating work site locations. Apart from making college more accessible, the courses include workshops to explore educational goals, in-house classes and related academic support services, and provisions for obtaining college credit for certain life and work experiences.

Targeted Education, Training, and Counseling Projects.

Here the emphasis is on pilot-programs that are original and related to particular localities within Ford's operations or to special segments of the workforce. Our idea is to encourage educational innovation with a selected target of service that does not otherwise fit easily into the design of existing programs.

Successful Retirement Planning Program.

This offering helps workers plan for their retirement and affords guidance related to such diverse subjects as pension benefits, insurance, legal considerations, and time utilization. This was the first cooperative labor-management initiative, which recognized that personal planning beyond the formal workplace would produce greater worker satisfaction at Ford.

Financial Education Program.

This program assists workers with the management of personal finances. It provides guidance related to financial planning and goal setting, investments and insurance, wills, trusts, loans and consumerism, and UAW-Ford benefits. Similarly, the Successful Retirement Planning Program encourages workers to attend the workshops with their spouses.

Health and Safety Program and an Employee Assistance Plan.

These are among other initiatives funded under the UAW-Ford collaboration. The health and safety project is a long-term commitment now extended by the UAW and Ford: it uses a national joint labor-management committee to generate employee awareness of workplace hazards. Under the UAW-Ford collective bargaining agreements, funds are provided for training programs and research projects to create a safer and more productive industrial environment. The Employee Assistance Plan is UAW-Ford's effort to offer workers and their families confidential assistance in resolving personal problems, such as alcohol abuse, drug addiction, and other debilitating individual traumas. It is the most recent EDTP signpost of UAW-Ford's concern for the personal and economic well being of people who are critical to the company's ultimate business success.

The founding principle of the EDTP was the belief that a cooperative program of labor and management "dedicated to human growth and understanding" would lead the way to the company's revival after the devastating economic dislocations and layoffs of the 1970's. This collaborative endeavor has surely contributed to Ford's resurgence. We went ahead with the EDTP with the

idea that all initiatives sponsored by UAW-Ford would be interrelated and support each other. Every added initiative, started under the collective bargaining agreements negotiated in 1984 and 1987, has contributed to the success of our initial experiments. We have given overall coherence to this complicated program by a firm insistence that every offering to hourly employees be driven by the express interests of unionized workers in each Ford plant. To put it simply: the union and the company want the EDTP to realize the education needs and personal aspirations of the Ford workforce.

Our experience during these years of experimentation has shown that workers' interests readily mirror the concerns of the corporation when worker interests are the driving force of company education strategies. The overarching legacy of the EDTP is its favorable impact in terms of individual satisfaction with employment at Ford:

- . The EDTP has helped workers understand that their union and the company are truly committed to their personal growth and development.
- . Worker feelings of accomplishment, self-satisfaction, and job satisfaction have been fostered.
- . Workforce skills have been upgraded, job flexibility has been encouraged, and quality of life programs at Ford have been greatly strengthened.

Implementing the EDTP is the combined responsibility of union and management at Ford. The Joint Governing Body which provides guidance and direction for the program is made up of equal numbers of UAW and Ford Company representatives; the co-chairmen are Ernest Lofton, UAW Vice President and Director of the union's National Ford Department, and Peter J. Pestillo, Vice President of Employee and External Affairs at Ford. The Joint Governing Body is responsible for every EDTP program, authorizes all expenditures, and

provides guidelines for administration through the UAW-Ford National Education, Development and Training Center located on the campus of the Henry Ford Community College in Dearborn, Michigan.

Despite the establishment of a single National Education, Development and Training Center in Dearborn, the Center staff who monitor EDTP programs respond to local proposals in order to create educational services for Ford workers. The Center establishes a national framework to coordinate administrative functions distributed among Ford plants throughout the United States. Basically, the EDTP is a local undertaking, whose energy and activities come from Ford's 85 major locations. This is a bottom-up enterprise with worker needs and program accessibility given the highest priorities.

Both the UAW and Ford believe that their unprecedented experiment in workforce training and education has been an unqualified success. We have demonstrated that union and company working together can give new meaning to the more obvious mandate for cooperation that international competition gives to labor-management relations. The EDTP success is more than just another strategy for worker security and corporate profitability. We have written the first chapter in a description of how the mutual interests of union and company contribute to personal fulfillment and career development in the American workplace.

EDUCATION IN SOUTH CAROLINA: PROGRESS FOR THE NEXT CENTURY

Carroll A. Campbell, Jr.
Governor
State of South Carolina

There is nothing more exciting than unlocking the mind of a child and watching the child grow up into a thinking, successful adult. I have had the privilege of experiencing this joy in my own family; and for this reason, I have supported education programs as a legislator and chief executive. There is no greater satisfaction in political leadership than education leadership.

South Carolina has never had a reputation for educational success. We have for too long been around the bottom of the totem pole, ranking near last in education throughout this century. I regret that in the past statistics did not lie. But South Carolina is turning its former, depressed educational traditions around. We now aspire to the very top in recognition among states undertaking to reform education.

South Carolina did not need the blast of A Nation At Risk (1983) to tell us that a war against educational failure would serve the economic and social interests of our state. Beginning in 1983 and building a unique alliance of business, government officials, and educators, South Carolina started a reform movement that has created an educational renaissance in the Palmetto State. The two key building blocks were the Education Improvement Act (EIA) completed in 1984, and the imposition of an extra penny on the sales tax (the Education Finance Act, 1977) which has provided

hundreds of millions of real dollars to strengthen our commitment to the public school system. These strategic changes in education were precipitated by the recognition that South Carolina must be smart to grow and compete in the modern world.

We understood in 1983-84 that educational reform would not be won in a short period of time. We knew a comprehensive program required the continued energy of business-education partnerships and specific procedures to judge our progress as the reform movement took hold throughout the state. Implementing changes and sustaining the reform momentum were critical if our innovative concepts were ever to succeed. We knew complex reforms had to be monitored so that we might be able to identify school improvements as well as to be certain that our goals were not watered down by regulation or by a loss of confidence in our education vision. The State of South Carolina started this first wave of education reform with the idea that success would not come easily or naturally.

The original design of the reforms contained in the EIA has been maintained over the past five years. We were optimistic in 1984 and created sixty-one different reform initiatives, a breath-taking agenda of change which has largely been implemented as we move into the last decade of this century.

The indications of success in South Carolina require some elaboration. In every instance as Governor, I have given personal attention to each phase of educational progress and am determined that our reform beginnings will be strengthened into the 21st century.

Service to Students. South Carolina has developed dozens of individual programs for academically gifted and talented students which are being

installed in local school districts everywhere in the state. We have made impressive gains among students who have been enrolled in special remedial and compensatory programs. We are working to reduce the risk of academic failure at every educational level and are concentrating on the earliest elementary grades. Although remedial efforts have raised reading and mathematic scores, our half-day programs for four year old pre-school youngsters complements the reform initiatives already underway for students enrolled in South Carolina's public schools.

Services to School Personnel. We have not forgotten that better teachers will produce better students. South Carolina has raised teacher salaries beyond the Southeastern averages, with a \$25,623 standard in 1988-89. We have also won greater participation in a voluntary Teacher Incentive Program, which gives superior teachers added compensation as well as funds for special educational projects. We have taken a national lead by establishing new ways to measure minimum satisfactory performance for school administrators (Principal Evaluation Program), a far reaching staff development program, and a small college loan program for prospective teachers.

Public Confidence. One unique feature of South Carolina's educational reform movement was the establishment of two blue-ribbon committees to act as oversight bodies and to insure the widest public involvement in the process of change. A comparison of the 1988 National Gallup Poll on education with a similar poll in South Carolina gives every sign that South Carolina, judged by the opinions of the general public and parents of public school children, is making substantial progress in improving education faster than the nation as a whole.

South Carolina will not stand still with its existing reform structure. Our first experience with reform was intended to enhance the performance of the existing school population. The early reform initiatives undertaken in the EIA will be continued. What we have adopted this year is a plan for the next decade. "Target 2000" is a design for excellence. Though our first reform strategies sought to reverse the rising tendency toward mediocrity in education, a reformist approach by itself will never achieve educational excellence. We are now looking to push up the ceilings of student expectation and performance. In the past, South Carolina legislated to improve the foundations of education quality through remediation, compensatory programs, and teacher equity. Now our state is moving beyond these early targets. Nothing less than the best is also among our reform expectations.

The initiatives in "Target 2000" look to produce school graduates with greater intellectual creativity and more marketable skills. We have no single formula to achieve these goals. South Carolina's latest programs will include an expansion of early childhood training for all at-risk four-year old children, "parenting" classes for families with youngsters less than five, stress in reasoning and higher-order thinking for all students, as well as a 50 percent cut in the school dropout rate by the end of this century. Innovation in classroom instruction will come from the elimination of bureaucratic regulation of local schools, maintenance of the original commitments to improve teacher quality and compensation, and the strengthening of accountability provisions at the school district and state level.

We want to challenge students by challenging the existing structure of

the schools. Why not try to move away from standardized testing? Does every class have to begin and end within 50 or 55 minutes? Can we move our best high school students into college at an earlier age? Is it possible to supplement current teacher certification procedures with additional higher education programs? Can we encourage more innovation at the local school site? No reasonable question about existing practices will escape review under South Carolina's "Target 2000."

These are the kinds of legislative initiatives that are beginning to renew public education in South Carolina. Our program would be incomplete, however, if it concentrated only on the public school itself. We recognize that beyond the formal school system the family support base is the most important element in educational success.

What we have added in "Target 2000" is an environment in which parental and business involvement are inserted into educational reform. We have programs for children of teen-age mothers that require mothers to enroll in school themselves; we are asking the elderly to assist in schooling by providing child care services to mothers who enter educational programs. We are trying to teach these vulnerable mothers that their education will be passed on to the highest-risk population of South Carolina's children.

We also know that a lack of basic skills among South Carolina's adult population is a severe problem. Forty percent of the workforce lacks a high school diploma. Our reform movement has not ignored this reality. An outstanding initiative on "Workforce Excellence" has addressed the problems of adult literacy and job skills enhancement at work sites throughout the state. A recent survey indicates that some 377 employers have active

classrooms in their places of work; we have set up an additional 324 programs in 16 state technical colleges. Over 5,300 employees have been trained and more than 8,000 workers await a chance to enter classes which teach the basic skills and specific job-related subjects. We know the improvement of education in South Carolina involves a substantial obligation for people already beyond the normal school age. We also know that new jobs will not be created in our state if there are not educated South Carolinians ready to work in an ever expanding economic base in South Carolina.

Business leaders are also cooperating in curriculum development within South Carolina's public school system. Another important initiative on "Workforce Excellence" has reached out to the corporate world for their participation in revising the school curriculum. We have asked businessmen what educational skills will be needed in industry over the next ten years. We want to learn from business itself what schools should do to make South Carolina competitive and prosperous. Our goals with parents and the corporate sector are not simply an effort to improve our economy. We have an equal concern about what will happen to the people of South Carolina if they do not have the skills called for by new technology. Do we want children impoverished by the meager education of their parents? There is no idea more powerful in education than the reality that educational progress must rely on the integrity of the family foundation.

If there is one accomplishment of which I am most proud, the establishment of the Governor's School for Science and Mathematics on the campus of Coker College would rank at the very top of the list. The private sector provided a start-up endowment of several million dollars

which is now being supplemented by monies voted by the legislature. This is an opportunity for students from everywhere in South Carolina to receive intensive training in math and science, subjects critical to the business foundations of our state. We have built an all-scholarship institution; no one can pay to enroll. Young South Carolinians are selected on the basis of their special aptitudes for the hard sciences and capacity in mathematics. The achievement of the first class is remarkable, with outstanding scores on the junior-level PSAT examinations. I am proud to report that our students excelled beyond the test results of a similar institution in North Carolina supported by the National Science Foundation. South Carolina's vibrant experiment with this residential high school promises to reward the state with a home-grown, home-educated, home-to-stay workforce of scientifically literate citizens.

We are determined to succeed with education reform in South Carolina. Our goals are clear in educating for the best jobs, strongest businesses, and the greatest personal opportunity for people. What we want to realize is a land of educational opportunity for every citizen, from the earliest years to retirement, in which the chance to learn is always accessible. I believe South Carolina is in the vanguard of educational change that will create a better future for every one of our people. What better dream could anyone imagine.

STATE-EDUCATION-BUSINESS COORDINATION
OF SOUTH CAROLINA'S SCHOOL REFORM PROGRAM

Terry Peterson, et al*
Executive Director
South Carolina Business-Education Committee

When Fortune Magazine held an Education Summit for the nation's top CEO's in September, 1989, South Carolina was held up as a "paragon of reform" for two reasons. First, Fortune cited South Carolina for the alliance of business leaders, educators, and lawmakers it had forged in 1984 to work for passage of a nationally recognized Education Improvement Act (EIA). Second, Fortune writers were impressed that this public-private partnership was still in operation, monitoring the reforms and ensuring accountability.

The South Carolina public-private alliance was not left to chance. It was a deliberate collaboration on the part of business, education, and government. For business leaders, it was the culmination of their involvement after years of neglect. For educators, it signaled their recognition of the valuable friend they have in business and the similarity of their goals. The most important discovery for both was the unbeatable team they made when they got behind a good cause and pushed together, even when the odds were stacked against them.

* Prepared by Jack Rogers, Speaker Pro Tempore, South Carolina House of Representatives; Montez Martin, Past-President, Trident Chamber of Commerce; Jim Wilsford, 1989 National School Administrator of the Year; Sally Huguley, Research Director, South Carolina House of Representatives.

Business was often absent when South Carolina educators were looking for support as schools went through the tumultuous changes of the 1960's and 1970's. When attention was paid to the schools, it was often negative, with business and industry executives complaining of the lack of a skilled workforce. Although the criticism was accurate, it lacked an understanding of the enormous challenges facing South Carolina educators.

In 1949, the per pupil expenditures for White students was \$111, more than double the expenditure for Black students (\$50). Black teachers earned about two-thirds the pay of White teachers. Until the 1970's, South Carolina's antiquated school finance system allowed wealthier school districts to spend as much as twenty times more per pupil than some of the rural, tax-poor districts.

During the 1970's, South Carolina educators began to whittle away at these time-hardened problems. A campaign led by educators and several citizen groups resulted in the 1977 Education Finance Act, which guaranteed all school districts enough funding to provide a minimum basic education for every student, regardless of the property wealth in the school district. Later in the decade, the General Assembly approved the creation of the Basic Skills Assessment Program, which mandated the teaching and testing of basic reading, writing, and math skills each student must acquire in each grade.

During this turbulent era and despite the efforts being made, few business or industry executives served on school boards or became involved in reform efforts. Businesses were undergoing market and management revolutions of their own, and few executives recognized how mutually beneficial it would be to draw business and education together. The 1980's

provided a rude awakening. Like businesses all over the nation, the South Carolina economic community faced tougher global competition, which underscored the need for a better, more competitive work force.

National reports described the connection between education and economic progress more emphatically, and pointedly said the condition of American public schools put the nation at risk. Clearly, the success of public education in a state was an indicator of its future economic success. Business finally recognized the enormous stake it had in the schools.

This set the stage for what was to unfold in South Carolina in 1983-- the building of a three-pronged education alliance that not only would successfully campaign for the most sweeping school reform proposal the state had ever seen, but also would remain intact to monitor and ensure its implementation and launch a new set of initiatives in 1989.

Under the leadership of Governor Richard Riley, two statewide committees were created to actually draw up a school reform proposal to be presented to the General Assembly during the 1984 legislative session. What was unique about these committees is that in addition to legislators and educators, more than 30 business leaders were asked to serve on the two panels. The committees were not mere window dressing. They actually hammered out each plank of the reform proposal. What resulted was the Education Improvement Act of 1984, which incorporated the best ideas of educators as well as many of the proven practices of private enterprise.

Six objectives were written into South Carolina's Education Improvement Act:

- . Raising of student performance by increasing academic standards at all grade levels

- . Strengthening the teaching and testing of basic skills
- . Elevating the teaching profession by strengthening teacher training, evaluation, and compensation
- . Improving leadership, management, and fiscal efficiency at all levels
- . Guaranteeing results by implementing strict quality controls and rewarding productivity
- . Creating more effective partnerships between schools, parents, community, and business

As a result of the EIA's tough accountability measures and its significant investment in teacher salaries, remedial and gifted education, and early childhood programs, South Carolina's schools have visibly improved. Basic skills test scores have risen steadily in the last four years, and student progress on the Scholastic Aptitude Test has outpaced all other states.

However, it is difficult to have a full appreciation for the EIA and its results without knowing what went on behind the scenes at the time of its creation. The interaction of legislators, educators, and business leaders in this effort set the tone for the development of the EIA that still can be seen today.

While the two blue ribbon committees forged the language of the proposed law, education, business, and government leaders together undertook a strategy never witnessed before in South Carolina. A five-point marketing campaign was developed to sell the EIA to the Legislature by way of the public.

First, seven public forums were held throughout the state to get public input and to fire up the community for educational improvement. More than 13,000 people attended these meetings, that were virtual pep rallies for

public education led by the governor, lieutenant governor, state school superintendent, a local business leader, and the local teacher of the year.

Second, television stations across the state donated 30 minutes of air time for a statewide address by Governor Riley on the need for education reform. It was in this television address that the governor announced he would seek a one cent sales tax increase to fund the EIA.

Third, business donated \$100,000 to create a foundation to back the school reform effort. This foundation paid for television advertisements that promoted the campaign's theme, "A Penny for Their Thoughts." It also funded a statewide public opinion poll which showed overwhelming public support for the school reform proposal and the tax increase to fund it. Telephone banks staffed by parents, educators, and citizens were also established to alert EIA supporters of upcoming key legislative votes.

Fourth, local chambers of commerce throughout the state appointed committees to address the needs of the schools in their area. And last, all the major education associations virtually made this fight their only priority in 1983-84.

The culmination of this effort was nothing short of a statewide referendum with one question on the ballot: "Will we support and fund educational improvement." The resounding answer coming from educators, parents, and the business community was "yes!"

Despite this groundwork and the growing momentum for school reform, the immediate answer from the Legislature, when it returned for the 1984 issue, was "No!" Out of 124 House members, only 22 representatives said they would support the proposed legislation and the tax increase to fund it. The entire House leadership was against the idea as well as key

legislators, such as the House Ways and Means Committee Chairman.

In retrospect, this was the real test of the public-private alliance. What it proved was the group jointly possessed the "fire in the belly" needed to see this campaign to a successful end.

A careful strategy was developed to turn the popular sentiment for educational improvement into a statutory program for reform. On the legislative side, it was decided the proposal could be sold more successfully on its merits piece by piece until opponents bought into the whole. This proved to be the right move whether the fight was in a legislative committee or chamber floor. It would have been easier for legislators to vote the entire package up or down than to come out publicly against such concepts as teacher pay raises or longer instructional time in full view of the public and the press.

Against this legislative backdrop, educators, parents, and the business community continued to stir the fires of public opinion. Local chambers of commerce and education associations dedicated their lobbyists to the cause. Some of the best known business leaders in the state came to the Statehouse to buttonhole legislators for their support. A telephone bank, funded by the foundation, encouraged people back home to let their respective legislators know about their support for the EIA.

Most effective were the private lunches sponsored for small groups of legislators. Featured during the lunches was a videotape of twenty South Carolina CEO's endorsing the EIA. Some of the corporate executives went so far as to say they could not recommend expansion of their South Carolina operation unless public education improved.

It was this two-pronged strategy--winning legislative support for the

package plank by plank and encouraging vocal public support--that led to enactment of the EIA.

In retrospect, there are important lessons to be learned from this experience. First, the support of the business community proved invaluable. One key strategy was the willingness of business leaders to be involved in the legislative process. The commitment of business went way beyond the usual response of, "We'll write you a check," or "We'll have our lobbyist take a look at it." Because they were early investors in the development of the plan, business felt it owned a piece of the action. This sense of ownership, shared with educators and elected officials, ignited a sense of loyalty and purpose that can still be seen today.

Second, the education community set aside its differences and pulled together for a common cause. This was a rarity in our state before the EIA. Usually, education groups were their own worst enemies as they battled each other for the education dollar. Education reform can be successful only when educators are willing to set aside turf battles to support a common cause.

However, passage of the EIA was just the beginning. The alliance formed to win passage of the law turned out to be its greatest asset during implementation. Time, in an August, 1989, article on school reform, praised South Carolina's school reform for maintaining its momentum, even after six years. The magazine specifically noted that it was the consensus built among business, parents, educators, and lawmakers that allowed the state to "catch its second wind" in the reform effort. Time stated, "The business community, motivated by the need for a literate work force, has been especially enthusiastic. 'We understand that we have

to make a generational commitment to education,' says Bob Thompson, Vice President of Public Affairs for Springs Industry, a textile firm. 'Reform is not just something you do one time.'"

In this spirit, the General Assembly last spring approved "Target 2000," follow-up reform legislation to the EIA. This new law specifically targets such thorny problems as drop-out prevention, pre-school intervention, school innovation and flexibility, restructuring, arts education, and the teaching and testing of higher order thinking skills.

One of the cornerstones of the EIA/Target 2000 package has been the accountability measures built into the law. These arose from the business community's needs for measurable results and the political reality of winning funding approval. Every segment of the educational system is held accountable:

- . For students, it means more required courses, tougher attendance policies, a "no pass, no play" activity requirement, and a high school exit exam.
- . For teachers, it means tougher training requirements and more frequent evaluations of their classroom performance.
- . For principals, it also means more frequent evaluations. Now prospective candidates are carefully screened at a State Leadership Academy, created by the EIA.
- . Each school receives an annual report based on its improvements compared with other schools. A similar report card is done on each of the state's 91 school districts.
- . A special public accountability division was created in the State Department of Education to monitor results. It publishes a yearly report called, "What the Penny is Buying for South Carolina."
- . And of special note, the blue ribbon committees, made up of educators, business leaders, and lawmakers, still meet to monitor the implementation and results.

The partnership among businesses, citizens, and educators has been extended from the state level to the local level. Thousands of citizens and educators now work together on school site improvement councils. More than 6,000 businesses statewide are involved in these partnerships with specific schools, undertaking everything from assisting at-risk youth, to on-the-job training, to providing instructional materials. The book has not closed on South Carolina's school reform movement. We look to publicize our success with the belief that our efforts can be applied in other states and school districts.

No doubt one critical point is this: Despite the continued need for education reform in our country, the parents of school-aged children--once the natural allies of educators in improving schools--are no longer a clear majority. New alliances must be formed. This leaves business as the only other powerful ally to help parents and teachers build good schools. Clearly, it is to the benefit of all that the alliance of educators, parents, business, and lawmakers be exploited and encouraged.

URBAN EDUCATION: THE CHALLENGE
OF THE EDUCATION COMMISSION OF THE STATES BUSINESS PARTNERSHIP

Robert Palaich
Denise Green
ECS Business Partnership

Our education system is not adequately serving most children and young adults. Only a small proportion of high school and college graduates actually leave the education system with the kinds of skills and experience they need to function effectively in society and the economy. Because of rapid and dramatic changes in the nation and the world, basic skills of reading, writing, and arithmetic no longer guarantee a place in the workforce. Students need to be actively engaged in learning in order to develop the skills needed for effective problem-solving and the capacity to think critically and creatively. In order for school systems to successfully meet these new challenges significant changes must occur in the way teachers and students approach learning. Though these changes may differ from place to place, this process of change is called restructuring. The time is right for business, political, and education leaders to build partnerships that bring about these changes.

The national interest demands that urban public schools become more effective in helping their students learn. Business and state leaders now realize that city schools must succeed for individual states and their economies to succeed. Furthermore, continued progress in the educational achievement of minority youngsters is absolutely dependent upon the success of urban schools. In 1984, while minority students accounted for 29 percent

of all U.S. students, they accounted for 73.1 percent of the students in the nation's forty-five largest school districts.

The urgency of this problem cannot be overstated. For urban schools to work, two tasks must be accomplished: thoughtful restructuring of the school system and a careful rebuilding of coalitions that support public schools.

Current Situation

In 1980, 74 million people, representing approximately one-third of the American population, lived in cities of at least 50,000. Forty million people, representing almost one-fifth of the population lived in cities with at least 250,000 residents. Contrary to the popular image, on the average central cities are predominantly White. In 1980, 64 percent of all central city residents were White, 22 percent were Black, 11 percent were Hispanic, and 3 percent fell into other racial or ethnic categories. Still, this represents a significant concentration of racial minorities in cities. Although only 24 percent of all Whites live in central cities, 58 percent of Blacks make their home there as do 50 percent of Hispanics.

Because there is a direct connection between race and ethnicity and poverty, cities with large minority group populations face radically different problems when compared with their predominately White counterparts. According to the 1980 Census, only 8 percent of White central city residents had family incomes below the poverty level, while the figures for Blacks and Hispanics were 27 and 25 percent respectively. This racial and ethnic imbalance is more pronounced if one considers both poor and near-poor families. In 1980, 11 percent of central city Whites had a family income 125 percent of poverty level or less, while 34 percent of Black families and 32 percent of

Hispanic families in the central city lived at this income level.

Central cities are not only home to the majority of minority group citizens who experience poverty disproportionately, but they are also home to a disproportionate number of families headed by females, single parents with children under of the age of 18, who bear the brunt of contemporary poverty. In 1980, 32 percent of all such White families, 66 percent of all such Black families and 65 percent of all such Hispanic families lived in central cities.

The concentration of the poor into isolated communities has been most clearly shown in William Julius Wilson's studies of the nation's five largest cities, New York, Chicago, Los Angeles, Philadelphia, and Detroit, which accounted for half of the total poor population of the 50 largest cities in 1980. In these five metropolises, the number of poor grew by 22 percent between 1970 and 1980, while the number of people living in poor neighborhoods (census tracts with at least 20 percent poverty) grew by 40 percent. These concentrations of the poor are also concentrations of racial or ethnic minorities, and the extremely poor neighborhoods of these five cities were overwhelmingly Black or Hispanic.

The human dimensions of this concentration of poverty can be seen in the use of the United States census materials by William Julius Wilson in his descriptions of public housing, such as the Robert Taylor homes of Chicago:

The official population of the Robert Taylor homes in 1980 was almost 20,000, but there were an additional 5,000 to 7,000 non-registered adults. All of the registered households were black and 69 percent of the residents were minors. The median family income was \$5,470. 93 percent of the families with children were headed by a single parent and 83 percent of the non-elderly-headed families with children

received AFDC. Unemployment was estimated to be 47 percent in 1980. With .5 percent of Chicago's more than 3 million people, the Robert Taylor homes were the location of 11 percent of the city's murders, 9 percent of its rapes and 10 percent of its aggravated assaults.

The process of concentration of racial and ethnic minorities and the poor is accelerated and magnified in the urban public schools. This happens in part because of White flight from the public school systems and in part because of the internal policies of the schools and school systems themselves.

In 1980, the public school systems of the central cities of the United States served 19 percent of all the White public school student, 56 percent of all the Black public school students, and 48 percent of all the Hispanic public school students in America. In addition, the levels of achievement in predominantly minority schools are significantly lower than those in predominantly White schools and the likelihood of high dropout rates much greater. A study of 5,000 California schools shows that more than two-thirds of Black and Hispanic third graders were in schools with test scores below the national norms. The lowest quartile of California schools, ranked by test scores, were 67 percent Black and Hispanic and had only 28 percent White students. The top fourth of the schools, in contrast, were 85 percent White, 7 percent Hispanic, and 2 percent Black. By grade three, about five of every six Black and Hispanic students were in below-average schools while 60 percent of Whites were in above-average schools. Similar patterns were found in Chicago public schools by the Chicago Panel on Public School Policy and Finance, an independent research group.

Policy Initiatives to Date and Potential New Directions

As recently as a decade ago, the problems of urban youth appeared

to be much simpler to many policy makers, and the objective was to get them back in the classroom. More recently, policy makers became convinced that young people did have real problems, namely, drugs, pregnancy, violence, gangs, and other social impairments. The second-generation policy response was to establish programs redressing these conditions. As service providers worked with young people in these programs, they identified four characteristics commonly faced by students at risk: low self-esteem; little sense of accomplishment, academic or otherwise; a lack of enough trust and confidence in the future to invest in it; and an inability to connect to the broader society.

The Education Commission of the States (ECS) and several other organizations have worked to identify five strategies which make up the next at-risk policy. The five strategies are early intervention, interagency and public/private collaboration, school restructuring, parent involvement, and mentoring. These strategies focus on altering environments in which the children live: school, family, and community.

Unfortunately, the five strategies are far from commonplace. In a recently released ECS study of six urban secondary schools, researchers found that for the most part the schools: assumed the "problem" was with the student; did not target school policies or practices for major revision; assumed that personal and social supports would help students succeed in their academic endeavors; did provide traditional world of work experiences; did collaborate, to a surprising degree, with outside agencies; and benefited from district leadership and funding. This study yielded several important conclusions. First, educators must be able to rise above the "definition" hurdle; that is, what are the characteristics of youth

at risk? Definitions and characteristics of youth at risk do not fit into neat boxes around which a neat program can be built and implemented.

Second, the prevailing assumption is that the problem is the student's deficit; the student must be changed to fit the culture and organization of the school. Third, programmatic strategies tend to provide social service or affective supports, rather than using academic success as a strategy to combat the symptoms of being at risk.

Strategies

The mission of the ECS Business Partnership is to devise community-wide strategies to restructure public schools in America to assure:

- . improved student learning, communication, and thinking skills
- . reduced drop out rates
- . improved participation by all students in post-secondary educational opportunities

The objectives of the ECS Business Partnership are to make business: more effective in articulating expectations for student learning and more effective in building coalitions at the state, district, and school level that support and shape the restructuring of urban public education. To accomplish these objectives, the Partnership has agreed in principle to the following activities:

- I. To establish higher expectations for student learning at the national, state, district, and school levels, especially, for all students to be actively engaged in learning. To accomplish this goal, business leaders must be armed with:
 - A. A clear statement of how high content materials and high expectations can succeed in urban classrooms, a clear vision of how they can be supported in schools and districts across the country, and an understanding of the policies that support them.

- B. A clear description of the tools necessary to evaluate progress toward these student learning goals.
- II. To make business leaders partners in the call for restructuring urban public schools. To accomplish this goal, leaders must be armed with a strong statement of how systemic change will establish higher expectations for student learning.
- III. To build coalitions that support efforts to restructure urban public education, one must:
 - A. Work with the Business Partnership and other business leaders to develop a handbook on state and district coalitions that support comprehensive system change.
 - B. Work with the Business Partnership and other business leaders to identify more sophisticated and effective ways to link communities to their individual public schools and to the larger public school system.
 - C. Build a nationwide network of business leaders that push for the new expectations for student learning and school restructuring.

The task of winning a future for under-educated minorities will not succeed without the broadest public support. The ECS Business Partnership is a recognition that public urban education's renewal must be given the highest priority on our nations's agenda.

FORTUNE: THE COLORADO EXPERIMENT

Carol M. Ahlers
Operations Manager
Fortune Magazine

This has been a busy week in Fortune's efforts on behalf of improving public education and the strengthening of business/education partnerships. Earlier this week, we convened our second national Education Summit, bringing together a diverse group of business leaders, educators, and politicians to continue the dialogue we began at last year's meeting and to make plans for future initiatives. These efforts represent our belief that the renewal of America's tradition of educational excellence is a national priority.

Fortune magazine will be sixty years old in February, 1990. We are a business magazine. We publish the Fortune 500 list of the largest companies in America and abroad. We invented the corporation story, and for a generation, our staff of economists have carefully watched the American economy. For 60 years we have gotten into the minds of executives here and abroad to learn how corporations work--or do not work--and how today's management can profit from the experience of others.

But there is another journalistic tradition at Fortune, perhaps born as Fortune was during the Depression. And that is our commitment to reporting on the major social issues that affect America and American business.

Archibald MacLeish, who wrote for Fortune in its early days, called

Fortune "a more accurate and reliable historian of the Depression than any other publication." As early as 1942, Fortune produced a major story on "The Negroes' War" against discrimination--and the far-reaching effects it would have on America and the workforce. In the 1960's, photographer Walker Evans's images of "People" and "Places in Trouble," views of American cities in decline, became another milestone in our periodical's effort to relate business to the nation's urban experience. This tradition has continued throughout the 1970's and 1980's; Fortune has repeatedly covered such major social issues as poverty, America's underclass, homelessness, AIDS, and business's response to it, and, of course, a new American dilemma, the poor quality of education in America.

More than any other domestic problem of the 1980's education has become the issue that will have the greatest impact on our country. Can one imagine the generation of the 1990's unable to perform the work assignments of a dynamic world of business and industry? Without an educated workforce will the American economy be able to meet the global competition of Europe and Asia? Will we have people trained to master the complex computers and technology of a modern economy? Are we prepared to incorporate an increasing proportion of women into the future workforce? Can we eliminate drugs from the workplace? Even more perplexing is the recognition that our best educated students will have to do better to keep up with their peers in Europe and Asia.

In fact, there is not a single corporation in America that will not continue to be affected by the education crisis, and Fortune believes that corporate America must help--not to be charitable, not to promote good public relations, but to survive. In the old days, businessmen talked to

businessmen and educators talked to educators. Those days are gone, probably forever.

As awareness of the crisis grew, the editors realized that Fortune could do more than report on the problems, predict their far-reaching effects, or focus attention on various initiatives already underway. Our publication decided to play a role in galvanizing American business management to action.

Fortune could marshal its resources to create a forum for business leaders to meet, exchange ideas and experiences, and return home with a renewed sense of urgency and commitment. As Albert Shanker observes: "We have hundreds of people struggling to find the same answers. We need a system of sharing and communication."

With this in mind, Fortune invited over 100 leaders from various levels of business, government, and education to meet for an Education Summit in Washington, D. C. in September, 1989. We believe it was the first time a national conference on the subject had been held.

Our conference was structured not only to report on the seriousness of education's crisis, but also to touch on some of the major elements of the problem and to report on progress being made in each area. We hoped that, by sharing information and experiences, each participant would return home with a budding plan of action. American Express's president at the time, Lou Gerstner, put it this way: "We need to adopt that famous Noah principle. No more prizes for predicting rain. Prizes only for building arks."

The Fortune Education Summit concentrated on broad subjects that are key elements in the debate about education reform:

Restructuring. Corporations are doing it: why not the schools?

The issue of choice. Can we bring an essential ingredient of business, competition, to the public school system?

Teachers. How do we improve the quality of teachers, increase their numbers, and enhance their status within the community?

Other issues. What do we do about job training, support for pre-school programs, lowering the dropout rate, inspiring the students, and raising college enrollments?

The Fortune program included presentations by Governor Bill Clinton of Arkansas, and South Carolina businessmen who described their efforts to work with politicians and educators to initiate state-wide school reforms in their states. A common theme of virtually every session was the recognition that public education's revival required the cooperation of business.

Our Education Summit was featured in Fortune's November 7, 1988 issue. It was the cover story, and the response to it was overwhelming. This report received more editorial response than any other story written last year, except for Fortune's traditional 500 list issue. We printed the cover story in three large editions and have sent copies in quantities of 1-to-500 to various state and city organizations which are planning similar conferences. In addition, our publisher and my office have been sought out for advice on how to set up similar meetings on the state level and to recommend how local businesses can become involved.

All of this crystalized further last spring when James Hayes, Fortune's publisher, was approached by Colorado Governor Roy Romer about the possibility of our magazine sponsoring a state level business/education conference. Mr. Hayes readily agreed to sponsor the effort, and I was

assigned to assist the governor's staff as they planned the conference.

Governor Romer, who is action oriented, is totally committed to public education. He believes that education policies and initiatives cannot be nationally based, but must come from the local level, from every city, town, school building, office, student, parent, and teacher. Although some of us discuss education as a national crisis, a war to be fought at home, the Governor makes an analogy to the American Revolution. Organize the militia, and then unite to fight.

Governor Romer's first step to organize his militia was called the "Creativity Schools Initiative," a program designed to stimulate individual teachers to create specific new learning opportunities. Grants of \$5,000 were awarded last summer to 25 teachers who came up with the most interesting or innovative plans. The funding was provided by some of Colorado's leading corporations.

The Governor wanted his second effort--his business/education conference--to be equally oriented toward results. He wanted to design a conference that would result in direct action, between business people and educators, with actual commitments of time, manpower, technology, and shared resources.

Trust was the key element that characterized Governor Romer's meeting. It took many forms.

On the state level, starting with the governor's committee, we were immediately presented with any number of diverse groups--chambers of commerce, teachers associations, major corporations--all wanting to get their concerns on the program. The governor's staff had to work very hard to structure a meeting that would allow everyone to be heard.

No one questioned Governor Romer's recognition of the seriousness of education's problems and his concern for finding solutions. This was not grandstanding; he was not up for re-election. He came without a political agenda and participated in every minute of the conference. For the attendees, seeing that kind of leadership, seeing the Governor devoting so much time to the sessions, brought a sense of importance, commitment, and trust.

Fortune's participation as a sponsor enhanced this sense of serious business at hand. At dinner the first night, one attendee told me: "It's great to have Fortune here. We don't feel like Big Brother government is telling us to get together. If Fortune is interested in the process and is working with the Governor, it means that this issue is really important--not just to Colorado. It's even bigger than that."

At the end of the conference, Governor Romer asked each discussion leader to give a brief report on every group's progress. What followed was an outpouring--no, a flood--of real commitments: expanded intern programs, school visits to businesses, sharing technology, programs to involve parents, and other manifestations of a dedication to education reform in Colorado.

Governor Romer's summary of the conference results is a program for educational progress that is being repeated everywhere in the nation:

- . Partnerships are the right operational strategy. The search for solutions must be cooperative. We can no longer afford an "us" and "them" mentality.
- . Both business and education need to learn more about how the other works. Personal relationships must be forged. Neither community can afford to be isolated from the other.

- . There are significant differences in the operational styles of business and education: schools find it difficult to change, while businesses are used to change; education is process-oriented, business is profit oriented; communication in education is mostly directed inward, while communication in business is directed outward.
- . Trust and mutual respect are essential predicates to effective collaborations.

Colorado took a step forward to unite the business and education communities. At Fortune, we will remain close to Governor Romer's office to watch every conference initiative develop and grow. We believe that Governor Romer's leadership and the structure of this conference could serve as a model for other states to follow as they continue to focus on education and what needs to be done. Fortune is committed to Governor Romer's "bottom-line" message about every education reform project: "We must expect success."

NATIONAL GOVERNORS' ASSOCIATION:
PARTNERSHIPS FOR LIFE-LONG LEARNING

Raymond C. Schappach
Executive Director
National Governors' Association

As a result of President Bush's Education Summit with the governors in September, 1989, the need to provide the level of training necessary to guarantee a competitive workforce has been made a high priority in education. But the importance of early childhood development, improving the quality of schools, and developing performance measures for student achievement should not be overshadowed by the skills and educational needs of the current labor force. This reality is critical to both the short and long term viability of the United States economy. Indeed, of all the goals addressed at the summit, perhaps the most difficult issue facing business, educators, government, and individuals is the need to provide quality life-long learning opportunities for all segments of the American labor force.

In the future, early childhood intervention, restructuring our schools, and re-establishing standards of excellence compose the foundation upon which a world-class economy will be built. Today as many as 40 million adult Americans have some literacy problem that reduces their productivity and economic potential. The education community, government, and private sector must address the need for an adaptable workforce that can respond to increased global competition and technological change challenging the current and future workforce.

Identical educational mandates will apply for the nation's elementary

school population. When discussing the educational needs of today's workers, policy makers should not conclude that we face only a short-term, single-generation problem that can be corrected for future workers by concentrating on providing better schools for the young. Restructuring the primary and secondary school systems will not by itself meet the present requirement for the development of quality life-long learning systems. The Head Start child of 1989, who will graduate from high school in the year 2002, may change careers as many as seven times in his or her life. And in the face of ever-accelerating technological change, the skills required by those jobs may change many more times. That four-year-old child faces a lifetime of learning and adapting in order to survive in the economy of the twenty-first century.

One of the objectives for the development of life-long learning systems must be to ensure equity in the human resource investment made for individuals. The growth of the workforce depends on new entrants drawn primarily from the groups in our society, especially minorities, who have received the smallest public and private investment in skills development. Human resource expenditures by private enterprise often exacerbate the differences instigated in public education: workers with the fewest credentials receive less formal employer-sponsored training. Education must equip all students, whether or not they are college-bound, with lifetime adaptability skills necessary to acquire new work-related knowledge and credentials. Credentializing systems must be developed to verify workers' skill attainment, whether earned in formal education and training institutions or on the job, and to reflect a level of achievement consistent with the demands of the workplace. And business must invest in

upgrading skills and retraining to make workers productive by world economic standards.

Adult basic education, post secondary vocational education, and government programs such as the Job Training Partnership Act and the Job Opportunity and Basic Skills Program can no longer be thought of as part of a "second chance" system. These endeavors must be made an integral part of a comprehensive system of life-long learning to make available to every worker real opportunity and access to skill development. To this end, government, primarily state government, under the leadership of the governors, must forge integrated education, training, economic development, and human resource investment strategies that meet the exigencies of a changed economic development environment.

The nation's governors are increasingly turning their attention to workforce development. In 1986, the chairman of the National Governors' Association challenged his colleagues to address issues related to developing a more competitive workforce. In the summer of 1987, the governors issued two reports in response to this challenge, Bringing Down the Barriers and Jobs, Growth, and Competitiveness. In these reports, the governors set forth action plans and policies to reduce administrative barriers and increase the economic and productivity potential of their citizens. The primary need identified by the Task Force on Jobs, Growth, and Competitiveness was the development of more productive workers.

In late May of this year, the National Governors' Association, collaborating with the American Council on Education, The Council for Adult and Experiential Learning, and The College Board sponsored a conference on "A More Productive Workforce: Challenge for Postsecondary Education and

Its Partners." This conference identified a number of priorities for creating comprehensive human resource development strategies for a more productive and competitive labor force:

- . the need to incorporate schools and training programs into a holistic human resource investment strategy that involves government, education, and business in alternative methods for skill credentializing;
- . the need to encourage employers to invest more in their workforce in partnership with government and education, to provide better skills preparation and remove administrative barriers;
- . the need for the adult education and training system to be redesigned to become more systematic and comprehensive;
- . the need for public job training to become more "market-driven" and have greater responsiveness to the demands of the workplace; and
- . the need for education, government, and business to work to overcome attitudinal and institutional barriers to worklife education and training.

Following up on the results of that conference, the governors pressed for the inclusion of life-long learning as one of the educational areas to be addressed at the Education Summit. The governors placed among the national educational priorities the promotion of the idea that learning is a life-long process; that work-related education and training systems must become more immediately useful in the business world; and that public and private investment in human resource development must be increased. It was recognized at the summit that the successful attainment of life-long learning goals depends on the development of public and private partnerships for making education more responsive to the workplace, expansion of workplace literacy programs, increased accessibility for workers to skill-upgrade programs, and increased private investment in our human resources.

The governors' emphasis on life-long learning systems that are built on partnerships between government-supported programs, educational institutions, and employer-based training is a result of years of experience and experimentation. To address the problem of workplace literacy, states are beginning to seek business-school collaborations. For example, Missouri has established an interagency, public-private task force that will survey employees in larger firms to determine literacy needs, teach employers how to identify literacy problems that affect productivity, and identify organizations to provide on-site literacy training for workers. To forge a closer bond between economic development and education and training, Iowa has chosen to locate Industrial New Jobs Training in the state community college system. The program's objective is to create new jobs and provide new skills training and education for future economic growth.

To ensure fairness in human resource investments, governors are exploring methods to afford learning opportunities for every worker in their states. Michigan has implemented an Opportunity Card that provides access for the Michigan labor force to approximately sixty education and training programs. Using this card, workers can obtain professional skills assessment, career development planning, education and job skills training, and job placement assistance. The program represents a collective partnership among government training programs and the education system and is funded by the Michigan Human Resource Investment Fund, a joint venture between the public and private sector. California, Delaware, and Rhode Island have developed funded programs for education and skills retraining, through a surcharge on the Unemployment Insurance Tax, converting a system

of unemployment support to one of unemployment prevention and real employment security.

What remains on our agenda is to expand existing public-private partnerships in education, training, and employment. The governors look to integrate economic development activities into the state human resource investment strategy and incorporate private sector partners into that strategy. Greater private investments in these programs can be encouraged through incentives, cooperative education and training programs, and encouragement of labor-management cooperation. The states can provide education and training programs that are responsive to the demand of the global marketplace and that offer access and opportunity to those groups who have traditionally been underserved in education and career training. The trend in favor of educational collaborations should be strengthened as a matter of government priority.

AN AFTERWORD

Fred M. Hechinger
President
The New York Times Company Foundation

This conference makes very clear that "Educating Tomorrow's Workforce" is an urgent national priority. The majority of students enrolled in America's public schools have little prospect of academic success, even if they remain in class long enough to graduate. This dismal prospect takes no account of those already out of school. We have an obligation to take people from where they are with academic deficiencies to where they want to be with workplace skills needed for productive employment.

Millions of Americans are now alerted to the reality that their future is directly related to the opportunity for educational renewal. But the public schools are losing as many as three of every five students to the drop-out calamity. Nor are those who do graduate getting smarter, as evidenced by the latest figures from the National Assessments of Educational Progress (NAEP). The catastrophe of educational disadvantage is compounded by the fact that minorities are particularly hard hit.

Lack of money remains a serious barrier to reform. The majority of public school students are studying science without laboratories; they are asked to read without school libraries. Replication of successful change also is made difficult by inadequate funds for communication. There is an intolerable gap between what we understand will help students learn and its implementation in American classrooms. Because most people resist change,

every commitment to educational progress must include the monies needed to publicize the latest pedagogical experiments and research findings.

Education is probably last among the scholarly disciplines in the transfer of its useful knowledge to the marketplace of the classroom.

Business is a critical contributor to education reform. Our policies must respond to match the needs of children, youth, and adults; they should be generously endorsed by business. But business cannot be expected to do more than supplement the essential changes leading to educational reform. One recommendation made at this conference was the possibility of businesses taking over vocational education. A long time ago John Dewey proposed "learning by doing," a progressive concept of education in an earlier period of education reform. Corporate executives are rediscovering this principle. This need not suggest the impossible notion of a corporate takeover of education responsibilities. But business and unions together can surely promote the kind of study at the workplace that helps people to develop skills and continue their intellectual growth. Recent NAEP findings support this theme with the demonstration of sizable gains in peoples' abilities between the ages of seventeen and twenty-four. Such educational improvement is most likely attributable to the incentives of employment and corporate education programs.

Ultimately, responsibility for education reform must remain with the public schools. Ironically, the strongest calls for educational improvement, beginning in 1983, have come from outside the public school establishment. This is why priorities for change sometimes meet resistance within the schools. How can we establish school-based decision making when the call for it comes largely from outside the schools?

Similar resistance surfaces when pre-school instruction is given a higher priority among the many goals which make up the country's education agenda. Can we make progress in pre-school learning if parents are not active participants in the reform movement? Another problem is the traditional reliance on multiple choice tests to determine what children have learned. We know the best way to find out how well students read and write is to let them read and write, and measure how well they are doing, such as in writing a letter, decoding a railroad timetable, or responding to an essay question. Are our teachers themselves prepared to undertake this responsibility of assessment? Do they have the time and are they ready to abandon multiple choice tests? Ultimately, successful restructuring of the schools depends on trust in teachers. Teachers must be made ready to become the key to school reforms.

Ultimately, the issue is not school reform, but the reform of society itself. We cannot improve education if everything that surrounds children and students negates the rhetoric of educational values. But regardless of the society around them, we should always make young people feel that we think of them as intelligent and capable of personal growth and success. Schools often fail in imparting this optimistic view to their students.

Education is a continuum. Too often it is split into unconnected fragments. Liberal corporate executives have come to understand the long-term advantages of early childhood training. Above all, they know that good education is good business, in and outside the workplace. The task now is to apply what works in the classroom to reforms on every level of American education.